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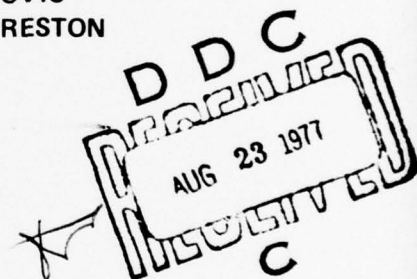
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**THE SRI-WEFA SOVIET ECONOMETRIC
MODEL:
PHASE THREE DOCUMENTATION -
VOLUME II**

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1400 WILSON BOULEVARD
ARLINGTON, VIRGINIA 22209

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Richard B. Foster, Director
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20. ABSTRACT (Continued)

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ABSTRACT

This volume contains the appendices for the Technical Note presenting the results of Phase Three work on the SRI-WEFA Econometric Model of the Soviet Union. Appendix A is documentation for SOVMOD II version of the SRI-WEFA Model, while Appendix B documents the SOVMOD III version.

DISCLAIMER

The views and conclusions contained in this document are those of the authors and should not be interpreted as necessarily representing the official policies, either expressed or implied, of the Defense Advanced Research Projects Agency of the U.S. Government.

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Appendix A

DOCUMENTATION FOR THE SRI-WEFA ECONOMETRIC MODEL OF THE SOVIET UNION

- SOVMOD II -

APPENDIX A
DOCUMENTATION FOR THE
SRI-WEFA

ECONOMETRIC MODEL OF THE SOVIET UNION:

SOVMOD II

by

DONALD W. GREEN

I. Structure and Scale

In its fully endogenous mode, the model consists of 156 stochastic relationships (behavioral and technical) and 97 identities arranged in the sectors given below. Each sector is identified by a single letter which is then used as the initial letter in the names of all variables determined in that sector.

SECTOR IDENTIFIER	SECTOR NAME	EQUATIONS	
		BEHAVIORAL	IDENTITY
N	Population and Employment	26	2
I	Investment	19	5
K	Capital Formation	18	24
A	Other Agricultural Variables	2	
X	Production	19	
U	Material Inputs		33
W	Wages	6	
Z	Incomes	5	4
P	Prices	11	2
C	Consumption	4	1
T	Budget Revenues	5	2
B	Budget Outlays	6	1
E	Exports	14	7
M	Imports	15	6
F	Hard Currency	4	5
G	Aggregate Identities & Balances	2	5
TOTAL		156	97

II. Simulation of SOVMOD II

The model is encoded into a simulation program using the WEFA general model solution system SOLVEM.* This program has standard facilities to convert the status of any variable (e.g., from endogenous) and to apply additive adjustments to any variable. In addition it has facility to change the status of BLOCKS of the model which has been utilized in the following way.

BLOCK NO.	DESCRIPTION	CONSISTING OF SECTORS
1	Population and Employment	N
2	Capital Formation	K
3	Production	A,X
4	Wages, Incomes and Prices	W,Z,P
5	Investment	I
6	Consumption	C
7	State Budget	T,B
8	Foreign Sector	E,M,F
9	Aggregates	G
10	Material Inputs	U

Most of the simultaneity in the model occurs in Blocks 1-5 and 10; the other four Blocks are virtually post-recursive except for certain import equations (grain and machinery) in Block 8. SOLVEM has a BLOCK feature which allows the user to change the status of an entire Block of equations from endogenous to exogenous.

SOLVEM also has the facility to allow the user to select different alternatives of an equation or set of equations, thus establishing different variants of the model. The alternative switches en-

* The coding of SOVMOD II was done by Raymond Chi  n. We are indebted to George Schink and Bill Brown, the developers of SOLVEM, for guidance in using it for this model.

coded in SOVMOD II are given below where ZERO is the initial default option:

ALTERNATE SWITCH NO.	SETTING	ALTERNATIVE	EQUATION NUMBERS
1	ZERO	Non-agricultural investment by adding components	I.1a-6a
	ONE	Non-agricultural investment by direct function (components by exogenous ratios).	I.1b-6b
2	ZERO	Industrial branch investment by direct function	I.10a-I.20a
	ONE	Industrial branch investment determined by aggregate level and exogenous share	I.10b-I.20a
3	ZERO	Gross profits, no anticipation variable	Z.7a
	ONE	Gross profits, with anticiaption variable ZFPG&9	Z.7b
	TWO	Gross profits determined by Residual Income	Z.7c
4	ZERO	Total consumption by adding components	C.1b
	ONE	Total consumption by direct function	C.1a
	TWO	Total consumption by residual function	C.1c
5	ZERO	Consumption Components by direct functions	C.2a-C.5a
	ONE	Consumption components by share functions.	C.2b-C.5b
6	ZERO	Industrial output, disaggregated capital stock, dummy variable 1964-1966	X.1a
	ONE	Industrial output, disaggregated capital stock, no dummy	X.1b

ALTERNATE SWITCH NO.	SETTING	ALTERNATIVE	EQUATION
6 (con't)	TWO	Industrial output, aggregated capital stock, dummy variable 1944-66.	X.1c
	THREE	Industrial output, aggregated capital stock, no dummy	X.1d
7	ZERO	Grain output, link equation to gross agricultural output.	X.18a
	ONE	Grain output, direct production function.	X.18b
8	ZERO	Direct production functions for industrial branches using only primary inputs.	X.7a-X.18a
	ONE	Production functions using exogenous material input series from I-O data.	X.7b-X.18b
	TWO	Same production functions as ONE with material inputs determined endogenously with balanced B matrix.	X.7b-X.18b U.1-U.2 UF-2
	THREE	Same production functions as ONE but material inputs determined endogenously using A Matrix and excess demands distributed using B Matrix.	X.7b-X.18b U.1-U.2 UF-3
	FOUR	Same as THREE, but excess demands distributed so as to minimize weighted coefficient change.	X.7b-X.18b U.1-U.2 UF-4

Except in the form in which total consumption is residually determined (Alt. 4=TWO), GNP is determined both from the side of production (eq. G.3) and from the side of use (by adding components). The difference is a simulation residual defined in equation G.7.

III. Variables

Variables in the model are contained in the attached alphabetical list; there are 252 endogenous and 140 exogenous variables. The following naming conventions have been employed.*

SYMBOL

CONVENTION

Initial Symbol

Sector symbols

Sector of model (see above list) in which endogenous variable is determined.

Q

Dummy or time trend variables (figures following generally denote year(s), e.g., Q65 is a dummy variable for 1965).

Final Symbol

9

Exogeneous variable other than Q-type.

Embedded or Trailing Symbols

Industries

I	Industry
C	Construction
T	Transport and Communications
S	Domestic Trade
G	Government and Services
A	Agriculture

Industrial
Branches

EP	Electro Energy
CP	Coal Products
PP	Petroleum Products
FM	Ferrous Metallurgy
NF	Nonferrous Metallurgy
CH	Chemicals and Petrochemicals
FP	Forest Products
PA	Paper and Pulp

* The reader is urged to study these conventions prior to consulting the equations of the model as an understanding of them will greatly facilitate that process.

SYMBOL

CONVENTION

Industrial
Branches (cont)

CM	Construction Materials
MB	Machine-Building and Metal-Working
SG	Soft Goods
PF	Processed Foods
NC	Not-Classified Elsewhere (Residual)

Other

&	Current ruble value (always used)
\$	Current dollar value (always used)
70	1970 Ruble basis (not always used)

NOTE: A variable is enogenous if and only if its name ends in 9 or begins with Q.

Data file management programs developed at WEFA were used to construct, maintain and utilize a databank for the model.* The structure of the list of variables is largely self-explanatory. Variable # refers to the number of the variable in the model (simulation program) which generally differs from the number on the data-bank. The set of model variables is a subset of the complete data-bank.

* We are indebted to Virginia Long for assistance in setting up these programs for our purposes.

SEPT 2, 1975

D O C U M E N T A T I O N

SERIES LABEL	DESCRIPTION	QTR	MON	ANN	UNITS	SOURCE	VAR#	EDU#
67	INDEX OF AGRICULTURAL INPUTS, CURRENT PURCHASES				1965=100, TRAN		1023	A.2
560	VALUE OF PRODUCTIVE LIVESTOCK, YEAR YEAR 1955 PRICES)				B PUELLES DIAMOND		1019	A.1
561	STATE BUDGET EXPENDITURES, ADMINISTRATION				B CUR R	DKHOZ	1493	B.1
562	STATE BUDGET EXPENDITURES, DEFENSE				B CUR R	DKHOZ	152E	
563	DEFENSE PERSONNEL EXPENDITURES IN CURRENT PRICES				B-CURR.R.	COIN74	153E	
564	STATE BUDGET EXPENDITURES, FINANCING THE NATIONAL ECONOMY, TOTAL				B CUR R	DKHOZ	1469	B.1
565	STATE BUDGET EXPENDITURES, GOVT SPENDING, NATL ACCOUNTS BASIS				B CUR R	DKHOZ	1511	B.6
566	SCIENCE EXPENDITURES, USSR GOVT (CURRENT PRICES)				B RUGLES	COIN73	1489	B.3
567	TRANSFER PAYMENTS (1973 FIGURES)				B R	73JEC393	2413	B.7
568	STATE BUDGET EXPENDITURES, RESIDENTIAL				B RUGLES	DKHOZ	1508	B.5
569	STATE BUDGET EXPENDITURES, SOCIAL AND CULTURAL MEASURES(INCL. SCIENCE)				R CUR R	DKHOZ	1478	B.2
570	CONSUMPTION, OER BASIS, TOTAL				B 1970R	TRAN	1341	C.1
571	CONSUMPTION, OER BASIS, CONSUMER DURABLES				B 1970R	TRAN	1370	C.4
572	CONSUMPTION, OER BASIS, FOOD				B 1970R	TRAN	1352	C.2
573	CONSUMPTION, OER BASIS, SOFT GOODS				B 1970R	TRAN	1360	C.3
574	CONSUMPTION, OER BASIS, SERVICES				B 1970R	TRAN	1350	C.5
575	EXPORTS TO CMEA OF CATEGORY III AND IV EXCEPT GRAIN				WPR		2579	E.4
576	EXPORTS TO CMEA				MSUS	OER	2723	E.19
577	EXPORTS OF FOOD TO THE DM				MSUS	OER	2620	E.9
578	GRAIN EXPORTS TO CMEA				MRB	OER	2568	E.3
579	GRAIN EXPORTS TO THE DM				MSUS	OER	2618	E.8
580	GRAIN EXPORTS TO LDC				MSUS	OER	2678	E.14
581	EXPORTS OF MACHINERY TO CHINA				MSUS	OER	2698	E.16
582	EXPORTS TO CMEA OF CMEA CATEGORY I COMMODITIES				MPR	INDIANA	2558	E.2
583	BALANCE OF TRADE WITH CMEA				MRB		2591	E.6
584	FORMS-100-1				MSUS	OER	2651	E.12
585	NET GRAIN EXPORT BALANCE AT 63 PRICES				CONS.-63SUS		2648	E.11
586	EXPORTS TO THE DM OTHER THAN FOOD				MSUS	OER	2608	E.7
587	NONMACHINERY EXPORTS TO CHINA				MSUS	OER	2703	E.17
588	EXPORTS TO YUGOSLAVIA AND THE FAR-EASTERN SOCIALIST COUNTRIES				MSUS	OER	2688	E.15
589	EXPORTS TO CMEA OF CMEA CATEGORY II COMMODITIES				PRD	INDIANA	2549	E.1
590	TOTAL EXPORTS TO CHINA				MSUS	OER	2711	E.18
591	TOTAL EXPORTS TO EUROPEAN CMEA(EXCL. YUGOSLAVIA, ALBANIA)				MRB	INDIANA	2581	E.5
592	TOTAL EXPORTS TO LDC				MSUS	OER	2631	E.10
593	TOTAL EXPORTS TO THE WORLD				MSUS	OER	2663	E.13
594	TOTAL EXPORTS TO THE DM IN DOMESTIC CURRENCY				W 1970 RB	OER	2731	E.20
595	UNSPECIFIED EXPORTS TO CMEA				MRB	INDIANA	2741	E.21
596	UNSPECIFIED EXPORTS TO THE WORLD				MSUS	OER	312E	
597	IMPO. CURRENCY CREDIT DRAWINGS				MSUS	OER	308E	
598	CREDIT REPAYMENTS IN HARD CURRENCY				MSUS	OER	330E	
599	OUTSTANDING DEBT AT THE END OF THE YEAR				MSUS	OER	3223	
600	HARD CREDIT BALANCE OF P. SUPPLIES: C. ETHICS + CORAM + SERTR9 - INTS - CREP				MSUS	OER	3231	F.5
601	GOLD RESERVES AT THE END OF THE YEAR				TONS	OER	3281	F.8
602	GOLD SALES				MSUS	OER	3278	F.7

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DOCUMENTATION

SERIES LABEL	DESCRIPTION	QTR	MON	ANN	UNITS	SOURCE	VAR#	EQUT
20	BRANCH INVESTMENT SHARE: NON-FERROUS (RESIDUAL SHARE)				NONE	NKH-TRAN	234E	
35	BRANCH INVESTMENT SHARE: PROCESSED FOODS				NONE	NKH-TRAN	240E	
28	BRANCH INVESTMENT SHARE: PETROLEUM PRODUCTS				NONE	NKH-TRAN	232E	
32	BRANCH INVESTMENT SHARE: SOFT GOODS				NONE	NKH-TRAN	239E	
371	CAPITAL INVESTMENT IN SERVICES 72R				B RUBLES	MARKHOZ	178	1.5
544	INVENTORY STOCK, END YEAR, NON-TRADE, NON-AGRIC., 1970 PRICES				B 1970 R	TRAN	1561	1.24
541	INVENTORY STOCK, END YEAR, NON-TRADE, NON-AGRIC., 1970 PRICES				B 1970 R	TRAN	1571	1.22
470	INVENTORY STOCK, END YEAR, DOMESTIC TRADE, 1970 PRICES				B RUBLES	TRAN	0191	1.9
259	CAPITAL INVESTMENT IN TRANSPORT & COMMUNICATIONS				B RUBLES	MARKHOZ	0158	1.3
546	CHANGE IN INV. STOCK, END YEAR AT 1970 PRICES, NON-TRADE NON-AGRIC				B 1970 R	TRAN	1588	1.23
545	CHANGE IN INV. STOCK, END YEAR AT 1970 PRICES, DOMESTIC TRADE				B 1970 R	TRAN	1598	1.21
438	SUM OF DEVIATIONS FROM MONTHLY PRECIPITATION VALUES				CM	IMS	98E	
611	AGRICULTURAL INDEX, WINTER YEAR INDEX FOR SOUTHERN UKRAINE				NONE	D-G	99E	
512	AGRICULTURAL INDEX, WINTER YEAR INDEX FOR SOUTHERN UKRAINE				B RUBLES	DIAMOND	351	K.17
425	RUBLES: TRADE, SUPPLY, OTHER (JAN.1, 1955 PRICES)				B RUBLES	NKH	351	K.10
425	RUBLES: TRADE, SUPPLY, OTHER (JAN.1, 1955 PRICES)				B RUBLES	TRAN	0361	K.4
404	RUBLES: CONSTRUCTION (JAN.1, 1955 PRICES)				B RUBLES	TRAN	0421	K.14
509	ADJUSTED BASIC FUNDS, HOUSING (JAN.1, 1955 PRICES)				B RUBLES	MARKHOZ	0381	K.12
427	RUBLES: CONSTRUCTION MATERIALS (JAN.1, 1955 PRICES)				B RUBLES	TRAN	0411	K.2
507	ADJUSTED BASIC FUNDS, INDUSTRY JAN.1, 1955 PRICES				B RUBLES	TRAN	0391	K.41
495	BASIC FUNDS, CHEMICALS, PESTICIDES, JAN.1				B.1955R.	COHN 70	291	K.27
164	CAPITAL STOCK, CHEMICALS AND PETROCHEMICALS (JAN.1)				B.1955R.	COHN 70	321	K.33
164	CAPITAL STOCK, CHEMICALS AND PETROCHEMICALS (JAN.1)				B.1955R.	COHN 70	261	K.21
159	CAPITAL STOCK, COAL PRODUCTS				B.1955R.	COHN 70	251	K.19
159	CAPITAL STOCK, COAL PRODUCTS				B.1955R.	COHN 70	441	K.18
607	INDUSTRIAL CAPITAL DERIVED FROM WESTERN IMPORTS (END YEAR VALUE)				B.1955R.	COHN 70	281	K.25
161	CAPITAL STOCK, FEROUS METALS				B.1955R.	COHN 70	311	K.31
161	CAPITAL STOCK, FEROUS METALS				B.1955R.	COHN 70	179E	
506	BASIC FUNDS ADJUSTMENT FOR 19621-H TRANSFER OF HOUSING CAPITAL				B.1955R.	COHN 70	3401	K.42
506	BASIC FUNDS ADJUSTMENT FOR 19621-H TRANSFER OF HOUSING CAPITAL				B.1955R.	COHN 70	301	K.29
144	CAPITAL STOCK, MACHINE-BUILDING AND METAL-ROCKING				B.1955R.	COHN 70	341	K.37
166	CAPITAL STOCK, PROCESSED FOODS				B.1955R.	COHN 70	3311	K.40
972	CAPITAL STOCK, PETROLEUM PRODUCTS, TOTAL IMPORTS (JAN.1)				B.1955R.	COHN 70	271	K.23
160	CAPITAL STOCK, PETROLEUM PRODUCTS				B.1955R.	COHN 70	331	K.35
167	CAPITAL STOCK, SOFT GOODS				B.1955R.	COHN 70	0241	K.1
169	CAPITAL STOCK, TOTAL INDUSTRY				B.1955R.	COHN 70	174E	
505	BASIC FUNDS ADJUSTMENT FOR 1958 I-T TRANSFER OF RR CAPITAL (AT DEC 31)				B.1955R.	COHN 70	1633	K.5
514	NET CHANGE IN BASIC FUNDS, CONSTRUCTION				B.1955R.	COHN 70	1653	K.11
514	NET CHANGE IN BASIC FUNDS, CONSTRUCTION				B.1955R.	COHN 70	1623	K.13
514	NET CHANGE IN BASIC FUNDS, TRANSPORT & COMMUNICATIONS				B.1955R.	COHN 70	1643	K.8
201	NET CHANGE IN BASIC FUNDS: CHEMICAL & PETROCHEMICAL				B.1955R.	COHN 70	1728	K.28
204	NET CHANGE IN BASIC FUNDS: CONSTRUCTION MATERIALS				B.1955R.	COHN 70	1758	K.34
194	NET CHANGE IN BASIC FUNDS: COAL PRODUCTS				B.1955R.	COHN 70	1693	K.22
197	NET CHANGE IN BASIC FUNDS: ELECTROENERGY				B.1955R.	COHN 70	1688	K.20

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SERIES LABEL	DESCRIPTION	QTR	MON	ANN	UNITS	SOURCE	VAR#	EQU#
200	NET CHANGE IN BASIC FUNDS: FERROUS METALLURGY				B.1955R.	NKH	171B	K.26
203	NET CHANGE IN BASIC FUNDS: FOREST PRODUCTS				B.1955R.	NKH	174B	K.32
205	NET CHANGE IN BASIC FUNDS: MACHINE-BUILDING & METAL-WORKING				B.1955R.	NKH	175B	K.30
206	NET CHANGE IN BASIC FUNDS: PROCESSED FOOD				B.1955R.	NKH	177B	K.29
207	NET CHANGE IN BASIC FUNDS: PETROLEUM PRODUCTS				B.1955R.	NKH	170B	K.24
208	NET CHANGE IN BASIC FUNDS: SOFT GOODS				B.1955R.	NKH	176B	K.36
209	NET CHANGE IN BASIC FUNDS: SERVICES				B.1955R.	NKH	167B	K.16
210	BASIC FUNDS: SERVICES (LAMB.1)				B.1955R.	NKH	401	K.15
211	BASIC FUNDS: NATIONAL ECONOMY, JULY 1				B.1955R.	TRAH	1541	K.39
212	ADJUSTED BASIC FUNDS: TRANSPORT AND COMMUNICATION (JAN 1, 1955 PRICES)				B.1955R.	TRAH	0431	K.7
213	RAILROAD CAR UTILIZATION: AVE 24HR DISTANCE PER FREIGHT CAR				KMS/24HR	SVXAZ103	037B	K.9
214	BASIC FUNDS: TRANS 2 COM JAN 1, 1955 PRICES				B.1955R.	TRAH	0371	K.6
215	PERCENT OF KIM: LIVESTOCK BEING FATTENED & YOUNG LIVESTOCK				PERCENT	NAPKHOZ	104E	
216	IMPORTS FROM CMEA: CMEA CATEGORY I COMMODITIES				MRB	INDIANA	278B	M.2
217	IMPORTS FROM CMEA: CMEA CATEGORY II COMMODITIES				MSUS	OER	202B	M.8
218	IMPORTS FROM CMEA: CMEA CATEGORY III COMMODITIES				MSUS	OER	289B	M.15
219	IMPORTS FROM CMEA: CMEA CATEGORY IV COMMODITIES				MRB	INDIANA	277B	M.3
220	IMPORTS FROM CMEA: CMEA CATEGORY V COMMODITIES				MSUS	OER	2841	M.10
221	IMPORTS FROM CMEA: CMEA CATEGORY VI COMMODITIES				M.CUR.5	OER74	342B	M.21
222	IMPORTS FROM CMEA: CMEA CATEGORY VII COMMODITIES				MSUS	73JEC	211B	M.10
223	IMPORTS FROM CMEA: CMEA CATEGORY VIII COMMODITIES				MRB	INDIANA	276B	M.2
224	IMPORTS FROM CMEA: CMEA CATEGORY IX COMMODITIES				MSUS	OER	281B	M.7
225	IMPORTS FROM CMEA: CMEA CATEGORY X COMMODITIES				MSUS	OER	280B	M.6
226	IMPORTS FROM CMEA: CMEA CATEGORY XI COMMODITIES				MSUS	OER	287B	M.13
227	IMPORTS FROM CMEA: CMEA CATEGORY XII COMMODITIES				MRB	INDIANA	275B	M.1
228	IMPORTS FROM CMEA: CMEA CATEGORY XIII COMMODITIES				MSUS	OER	2831	M.9
229	IMPORTS FROM CMEA: CMEA CATEGORY XIV COMMODITIES				MSUS	OER	288B	M.14
230	IMPORTS FROM CMEA: CMEA CATEGORY XV COMMODITIES				MRB	INDIANA	2791	M.5
231	IMPORTS FROM CMEA: CMEA CATEGORY XVI COMMODITIES				MSUS	OER	2851	M.11
232	IMPORTS FROM CMEA: CMEA CATEGORY XVII COMMODITIES				MSUS	OER	286B	M.12
233	IMPORTS FROM CMEA: CMEA CATEGORY XVIII COMMODITIES				M.CUR.R	VNTORG	343B	M.19
234	IMPORTS FROM CMEA: CMEA CATEGORY XIX COMMODITIES				MSUS	VNTORG	341B	M.20
235	IMPORTS FROM CMEA: CMEA CATEGORY XX COMMODITIES				MSUS	OER	2901	M.16
236	IMPORTS FROM CMEA: CMEA CATEGORY XXI COMMODITIES				M.1970 RB		2911	M.17
237	IMPORTS FROM CMEA: CMEA CATEGORY XXII COMMODITIES				MRB	INDIANA	311E	
238	IMPORTS FROM CMEA: CMEA CATEGORY XXIII COMMODITIES				MSUS	OER	313E	
239	IMPORTS FROM CMEA: CMEA CATEGORY XXIV COMMODITIES				MSUS	OER	317E	
240	IMPORTS FROM CMEA: CMEA CATEGORY XXV COMMODITIES				M.PERSONS	FDAD75	66B	N.12
241	IMPORTS FROM CMEA: CMEA CATEGORY XXVI COMMODITIES				M.PERSONS	FDAD75	65B	N.11
242	IMPORTS FROM CMEA: CMEA CATEGORY XXVII COMMODITIES				M.PERSONS	FDAD75	671	N.13
243	IMPORTS FROM CMEA: CMEA CATEGORY XXVIII COMMODITIES				M	UN	294E	
244	IMPORTS FROM CMEA: CMEA CATEGORY XXIX COMMODITIES				(000)	NKH02	74E	
245	IMPORTS FROM CMEA: CMEA CATEGORY XXX COMMODITIES				(000)	NKH02	334E	
246	IMPORTS FROM CMEA: CMEA CATEGORY XXXI COMMODITIES				(000)	NKH02	333E	

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SERIALS LABEL	DESCRIPTION	CTR	MON	ANN	UNITS	SOURCE	VAR#	EQU#
639	HIGH-ED-ENR : TRANSPORT				(000)	NKHOZ	75E	
390	ENGINEERING-TECHNICAL WORKERS IN INDUSTRY				000 MEN	NARKHOZ	072B	N.27
743	POPULATION IN AFRICA-SOUTH AMERICA AND SOUTH ASIA				M	UN	304E	
52	EMPLOYMENT, CONSTRUCTION				000 PERS	RAPAWY74	600	N.5
49	EMPLOYMENT, FORESTRY				000 PERS	RAPAWY74	590	N.9
695	EMPLOYMENT, GOVERNMENT AND SERVICES				000 PERS	TRAM	430	N.8
48	EMPLOYMENT, INDUSTRIAL				000 PERS	PAPAWY74	450	N.4
5	AVERAGE ANNUAL EMPLOYMENT, BRANCH:CHEMICALS & PETROCHEMICALS				000 PERSONS	RAPAWY	510	N.19
9	AVERAGE ANNUAL EMPLOYMENT, BRANCH:CONSTRUCTION MATERIALS				000 PERSONS	RAPAWY	548	N.23
3	AVERAGE ANNUAL EMPLOYMENT, BRANCH:COAL PRODUCTS				000 PERSONS	RAPAWY	478	N.15
2	AVERAGE ANNUAL EMPLOYMENT, BRANCH:ELECTROENERGY				000 PERSONS	RAPAWY	460	N.14
6	AVERAGE ANNUAL EMPLOYMENT, BRANCH:FERROUS METALLURGY				000 PERSONS	RAPAWY	490	N.17
900	EMPLOYMENT, FOREST PRODUCTS (EXCL. PAPER)				THOUS. PER.	RAPAWY75	530	N.21
8	AVERAGE ANNUAL EMPLOYMENT, BRANCH:MACHINE-BUILDING & METAL-WORKING				000 PERSONS	RAPAWY	528	N.20
13	AVERAGE ANNUAL EMPLOYMENT, BRANCH:CEMENT (RESIDUAL)				000 PERSONS	RAPAWY	578	N.26
7	AVERAGE ANNUAL EMPLOYMENT, BRANCH:NON-FERROUS METALLURGY				000 PERSONS	RAPAWY	508	N.18
693	ANNUAL EMPLOYMENT, PULP & PAPER				THOUS. PERS	RAPAWY	1898	N.22
12	AVERAGE ANNUAL EMPLOYMENT, BRANCH:PROCESSED FOOD				000 PERSONS	RAPAWY	568	N.25
4	AVERAGE ANNUAL EMPLOYMENT, BRANCH:PETROLEUM PRODUCTS				000 PERSONS	RAPAWY	448	N.16
11	AVERAGE ANNUAL EMPLOYMENT, BRANCH:SOFT GOODS (LIGHT INDUSTRY)				000 PERSONS	RAPAWY	558	N.24
45	EMPLOYMENT, ALL NON-AGRICULTURAL SECTORS				000 PERS	RAPAWY	648	N.3
61	EMPLOYMENT, TRADE ETC.				000 PERS	RAPAWY74	593	N.10
53	EMPLOYMENT, TRANSPORTATION AND COMMUNICATIONS				000 PERS	RAPAWY74	628	N.7
694	POPULATION, AGE Banded AGES (16-59/54)				000 PERS	TPAN	618	N.6
279	POPULATION, AGE Banded AGES				000 PERS	TPAN	618	N.6
356	POPULATION RURAL (END YEAR)				000 PERS	TPAN	618	N.6
354	POPULATION URBAN (END YEAR)				000 PERS	TPAN	618	N.6
446	POPULATION, TOTAL				000 PERS	TPAN	618	N.6
95	SPECIALISTS, INCO (END YEAR), INTERPOLATION WITH LAGFO ENROLLMENTS				000 PERS	TPAN	618	N.6
742	POPULATION IN WESTERN EUROPE				000 PERS	TPAN	618	N.6
368	PRICE FOOD SOLD TO CONSUMER CO-OPS AT NEGOTIATED PRICES, 1970 WEIGHTS				000 PERS	TPAN	618	N.6
725	WORLD IMPORT PRICES WEIGHTED BY SOVIET EXPORTS				000 PERS	TPAN	618	N.6
716	UNIT VALUE PRICE OF CRUDE OIL				000 PERS	TPAN	618	N.6
418	CONSUMPTION PRICE, FOOD (FROM PIRE70 & PAF70)				000 PERS	TPAN	618	N.6
755	PRICE OF GOLD				000 PERS	TPAN	618	N.6
745	PRICE INDEX OF WORLD MARKET GRAIN PRICES				000 PERS	TPAN	618	N.6
407	INVESTMENT DEFATOR, AGRICULTURE				000 PERS	TPAN	618	N.6
405	INVESTMENT DEFATOR, CONSTRUCTION SECTOR				000 PERS	TPAN	618	N.6
429	INVESTMENT DEFATOR, HOUSING				000 PERS	TPAN	618	N.6
406	INDEX OF STATE RETAIL PRICES FOR FOOD GOODS (DEFLATED)				000 PERS	TPAN	618	N.6
573	INVESTMENT DEFATOR, SERVICES				000 PERS	TPAN	618	N.6
409	INVESTMENT DEFATOR, TRANSPORT AND COMMUNICATIONS				000 PERS	TPAN	618	N.6
408	INDEX OF WHOLESALE INDUSTRIAL PRICES, HEAVY INDUSTRY (DEFLATED)				000 PERS	TPAN	618	N.6
549	INDEX OF WHOLESALE INDUSTRIAL PRICES LIGHT AND FOOD INDUSTRY (DEFLATED)				000 PERS	TPAN	618	N.6
575	INDEX OF WHOLESALE INDUSTRIAL PRICES LIGHT AND FOOD INDUSTRY (DEFLATED)				000 PERS	TPAN	618	N.6

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SERIES LABEL	DESCRIPTION	QTR	MON	ANN	UNITS	SOURCE	VAR#	EQ#
997	PRICE DEFLECTOR, INTERMEDIATE MATERIALS AND SERVICES				1970=100	UWG	393E	
754	WORLD MARKET PRICES OF MANUFACTURED GOODS				1963=100	UN	298E	
717	UNIT VALUE PRICE OF MANUFACTURED GOODS				1963=100	HEWITT	310E	
715	CONSUMPTION PRICE, NON-FOOD (FROM PIRNF)				1970=100	TRAH	120D	P.1
717	CONSUMPTION PRICE, TOTAL (FROM PIRNFCC)				1970=100	TRAH	120D	P.1
612	OFFICIAL EXCHANGE RATE OF THE DOLLAR IN DOLLARS				NONE	NONE	212E	
797	WORLD MARKET PRICES OF PRIMARY PRODUCTS				1963=100	UN	193E	
753	UNIT VALUE PRICES OF SUGAR IMPORTS FROM CUBA				1963=100	GER	314E	
794	WORLD SUGAR PRICES				1963=100	UN	316E	
375	SOVIET TRADE WITH WORLD, IMPORTS, OFFICIAL PRICE INDEX				1970=100.V.TORG		318E	
375	PRICES OF TOTAL WORLD IMPORTS				1963=100	UN	194E	
375	SOVIET TRADE WITH WORLD, EXPORTS, OFFICIAL PRICE INDEX				1970=100.V.TORG		309E	
424	PRICE DEFLECTOR, CONSTRUCTION ACTIVITY				1972=100. NANKHOZ		127E	
571	IMPORTS, PRICE DEFLECTOR, MANUFACTURED GOODS				1958=100 WCEA		212E	
973	EXPORT PRICE INDEX, OF MANUFACTURED GOODS				1970=100	NONE	23E	
431	FIVE-YEAR-PLAN CYCLE (1954-57, 62-64, 69-71, 74-76, ETC.)				NONE	UG	23E	
463	LOS TIME TEND 1929=0				NONE	TRAH	161E	
433	FIVE YEAR PLAN DUMMY (54-57, 62-64, 69-71, 74-76)				NONE	D-G	203E	
550	DUMMY VARIABLE FOR 1954-1964 (PRIVATE AGRICULTURAL EMPLOYMENT)				NONE	C-H	201E	
491	PRICE REFORM DUMMY: BEFORE 1967=1, 1967=5, AFTER 1967=0				NONE	NONE	242E	
561	SHIFT VARIABLE FOR 1968 ON = 1				NONE	D-G	222E	
362	TIME VARIABLE WITH 1950=1 AND 1973=24				NONE	NONE	160E	
609	DUMMY VARIABLE FOR 1967-1969 (WAGE REFORM)				NONE	C-H	236E	
773	DUMMY, SCALED BY VOLUME OF EXPORTS, 64-65=1.69-70=1.8, 0 OTHERWISE				NONE	NONE	195E	
622	DUMMY VARIABLE FOR 1950-59				NONE	NONE	249E	
37	DUMMY VARIABLE FOR 1950-60				NONE	NONE	247E	
620	DUMMY VARIABLE FOR 1950-61				NONE	NONE	242E	
614	DUMMY VARIABLE FOR 1959				NONE	NONE	248E	
664	DUMMY VARIABLE FOR 1960-1964				NONE	NONE	229E	
603	DUMMY VARIABLE FOR 1963				NONE	NONE	216E	
34	DUMMY VARIABLE FOR 1963-64				NONE	NONE	217E	
762	DUMMY VARIABLE FOR 1963-64				NONE	NONE	199E	
39	DUMMY VARIABLE FOR 1963-65				NONE	NONE	246E	
463	DUMMY VARIABLE FOR 1963				NONE	NONE	207E	
763	DUMMY VARIABLE FOR 1962-64				NONE	NONE	200E	
945	DUMMY VARIABLE FOR 1962-64				NONE	NONE	335E	
626	DUMMY VARIABLE FOR 1963				NONE	NONE	208E	
774	DUMMY VARIABLE FOR 1963-64				NONE	NONE	196E	
642	DUMMY VARIABLE FOR 1963-64				NONE	NONE	243E	
947	DUMMY VARIABLE FOR 1964-65				NONE	NONE	336E	
651	DUMMY VARIABLE FOR 1964-65				NONE	NONE	332E	
623	DUMMY VARIABLE FOR 1964-67				NONE	NONE	250E	
463	DUMMY VARIABLE FOR 1965				NONE	NONE	204E	
975	DUMMY VARIABLE FOR 1965-66				NONE	NONE	338E	
644	DUMMY VARIABLE FOR 1965-1967				NONE	NONE	214E	

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SERIES LABEL	DESCRIPTION	QTR	MON	ANN	UNITS	SOURCE	VAR#	EQU#
40	CURRY VARIABLE FOR 1966				NONE	NONE	215E	
683	CURRY VARIABLE FOR 1966-1968				NONE	NONE	219E	
577	CURRY VARIABLE FOR 1967				NONE	NONE	225E	
624	CURRY VARIABLE FOR 1967-68				NONE	NONE	221E	
520	CURRY VARIABLE FOR 1969, INDUSTRY WAGE				NONE	TRAW	205E	
680	CURRY VARIABLE FOR 1969-59				NONE	NONE	223E	
780	CURRY VARIABLE FOR 1969-70				NONE	NONE	197E	
689	CURRY VARIABLE FOR 1969				NONE	NONE	206E	
645	CURRY VARIABLE FOR 1969 ON				NONE	NONE	202E	
625	CURRY VARIABLE FOR 1970				NONE	NONE	209E	
993	RATIO GV02X : AGRICULTURE/FORESTRY				NONE	GOG	373E	
992	RATIO GV02X : CONSTRUCTION				NONE	GOG	372E	
988	RATIO GV02X : CHEMICALS & PETROCHEMICALS				NONE	GOG	366E	
985	RATIO GV02X : CONSTRUCTION MATERIALS				NONE	GOG	368E	
982	RATIO GV02X : COAL PRODUCTS				NONE	GOG	362E	
984	RATIO GV02X : ELECTRICITY				NONE	GOG	364E	
987	RATIO GV02X : FOREST PRODUCTS (INCL. PAPER)				NONE	GOG	367E	
985	RATIO GV02X : MACHINE BUILDING				NONE	GOG	365E	
981	RATIO GV02X : METALLURGY				NONE	GOG	361E	
991	RATIO GV02X : IRON ILC				NONE	GOG	371E	
998	RATIO GV02X : OTHER BRANCHES				NONE	GOG	376E	
992	RATIO GV02X : PROCESSED FOODS				NONE	GOG	370E	
983	RATIO GV02X : PETROLEUM PRODUCTS				NONE	GOG	363E	
989	RATIO GV02X : SOFT GOODS				NONE	GOG	369E	
984	RATIO GV02X : TRANSPORT/COMMUNICATIONS				NONE	GOG	374E	
943	RATIO GV02X : DOMESTIC TRADE				NONE	GOG	375E	
614	TAX RATE PROFITS				NONE	NONE	245E	
574	DEVIATIONS FROM HEAD OF TURNOVER TAX RATE (SMOOTHED)				NONE	TRAW	218E	
615	TAX RATE, ADJUSTMENT, OTHER SOCIAL SECTOR				NONE	NONE	220E	
924	RATIO VALUE ADDED/CUR. PRICES /GDP				NONE	GOG	307E	
424	INDEX OF AGRICULTURAL INPUTS, SOVIET AREA				1965=100	8 RUBLES	100E	
451	REFUGES, DEVIATIONS FROM PROFIT, STATE ENTERPRISES				8 RUBLES	NKHOZ	1390	1.1
584	REFUGES, OTHER SOCIAL SECTIONS				8 RUBLES	PRAVDA	1410	1.3
129	TOTAL STATE REDUCTIONS (1972 FIGURES)				8 RUBLES	73JEC393	1441	1.6
641	ADJUSTMENT FOR LOCAL TAXES, ADJUSTMENT FFES, AND LOTTERIES				8 RUBLES	73JEC	251E	
453	REVENUES, POPULATION (INCOME TAXES, STATE BONDS, LOTTERIES ETC)				8 RUBLES	NKHOZ	1430	1.5
447	STATE BUDGET, TOTAL REVENUES (CURRENT RUBLES)				8 RUBLES	NKHOZ	1451	1.7
454	REFUGES, SOCIAL INSURANCE DEDUCTIONS				8 RUBLES	NKHOZ	1420	1.4
450	REFUGES, TURNOVER TAX				8 RUBLES	NKHOZ	1400	1.2
942	MATERIAL INPUTS, AGRICULTURE/FORESTRY, CUR. PRICES				1970=100	GOG	3890U.2-13	
941	MATERIAL INPUTS, CONSTRUCTION, CUR. PRICES				1970=100	GOG	3880U.2-12	
925	MATERIAL INPUTS, CHEMICALS & PETROCHEMICALS, CUR. PRICES				1970=100	GOG	3820 U.2-6	
937	MATERIAL INPUTS, CONSTRUCTION MATERIALS, CUR. PRICES				1970=100	GOG	3840 U.2-8	
931	MATERIAL INPUTS, COAL PRODUCTS, CUR. PRICES				1970=100	GOG	3780 U.2-2	
933	MATERIAL INPUTS, ELECTRICITY, CUR. PRICES				1970=100	GOG	3800 U.2-4	

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SERIES LABEL	DESCRIPTION	QTR	MON	ANN	UNITS	SOURCE	VAR#	EQU#
926	MATERIAL INPUTS, FOREST PRODUCTS (INCL. PAPER), CUR. PRICES				1970=100	GOG	3930	U.2-7
927	MATERIAL INPUTS, MACHINE BUILDING, CUR. PRICES				1970=100	GOG	3918	U.2-5
928	MATERIAL INPUTS, METALLURGY, CUR. PRICES				1970=100	GOG	3778	U.2-1
929	MATERIAL INPUTS, IND. SEC., CUR. PRICES				1970=100	GOG	3878U	2-11
930	MATERIAL INPUTS, OTHER BRANCHES, CUR. PRICES				1970=100	GOG	3928U	2-16
931	MATERIAL INPUTS, PETROLEUM PRODUCTS, CUR. PRICES				1970=100	GOG	3868U	2-10
932	MATERIAL INPUTS, SOFT GOODS, CUR. PRICES				1970=100	GOG	3788	U.2-3
933	MATERIAL INPUTS, TRANSPORT/COMMUNICATIONS, CUR. PRICES				1970=100	GOG	3968U	2-14
934	MATERIAL INPUTS, DOMESTIC TRADE, CUR. PRICES				1970=100	GOG	3918U	2-15
935	WAGES, AGRICULTURE, STATE AND COLLECTIVE FARMS				RUBLES	TRAM	1060	M.2
936	WAGES, CONSTRUCTION				RUBLES	70JECQ2	1070	M.3
937	ANNUAL WAGE RATE, GOVERNMENT & SERVICES				CUR. R.	NKH	1108	M.6
938	WAGES, INDUSTRY				RUBLES	70JECR2	1058	M.3
939	WAGES, DOMESTIC TRADE AND DISTRIBUTION				RUBLES	70JECR2	1098	M.5
940	ANNUAL WAGE RATE, TRANSPORT & COMMUNICATIONS				CUR. R.	NKH	1088	M.4
941	TOTAL IMPORTS OF THE U.S. WEST				1963=100	UN M. BUL	297E	
942	TOTAL IMPORTS OF THE LDC-5				1963=100	UN M. BUL	302E	
943	TOTAL IMPORTS OF THE WORLD				1963=100	UN M. BUL	304E	
944	VALUE OF FELD FED TO LIVESTOCK				M1968R	SRI	103E	
945	INDEX OF AGRICULTURE/FORESTRY GVO IN CURRENT PRICES				1966=100	GOG	3571U	1-13
946	AGRICULTURAL PRODUCTION TOTAL				B RUBLES	DER	880	X.6
947	POTENTIAL AGRICULTURAL OUTPUT, NAT. PEAK-TO-PEAK SMOOTHED				B RUBLES	DG	890	X.6
948	INDEX OF CONSTRUCTION GVO IN CURRENT PRICES				1966=100	GOG	3551U	1-12
949	INDEX OF CHEMICALS AND PETROCHEMICALS GVO IN CURRENT PRICES				1966=100	GOG	3501	U.1-5
950	INDEX OF CONSTRUCTION MATERIALS GVO IN CURRENT PRICES				1966=100	GOG	3521	U.1-9
951	INDEX OF COAL PRODUCTS GVO IN CURRENT PRICES				1966=100	GOG	3461	U.1-2
952	CONSTRUCTION ACTIVITY				B RUBLES	NAPKHOZ	0900	X.2
953	INDEX OF ELECTRICITY GVO IN CURRENT PRICES				1966=100	GOG	3481	U.1-4
954	INDEX OF FOREST PRODUCTS GVO IN CURRENT PRICES				1966=100	GOG	3511	U.1-7
955	COAL PRODUCTION				TONS	DER	198E	
956	GRAIN PRODUCTION				M TONS	DIAMOND	3378	X.19
957	GRAIN PRODUCTION IN THE EUROPEAN CMEA				M TONS	FAN	293E	
958	GRAIN PRODUCTION IN THE LDC-5				M TONS	FAN	303E	
959	SECOND YEAR GRAIN OUTPUT				M TONS	DIAMOND	2948	X.19
960	CONSTRUCTION MATERIALS				M TONS	FAN	300E	
961	COAL PRODUCTS				1970=100	OERT4	820	X.13
962	ELECTRIC POWER				1970=100	OERT4	858	X.12
963	FERROUS METALS				1970=100	OERT4	788	X.8
964	FOREST PRODUCTS				1970=100	OERT4	778	X.7
965	WALDHEIM				1970=100	OERT4	800	X.10
966	WALDHEIM				1970=100	OERT4	848	X.15
967	PAPER AND PAPERBOARD				1970=100	OERT4	838	X.14
968	PAPER AND PAPERBOARD				1970=100	OERT4	810	X.11
969	PAPER AND PAPERBOARD				1970=100	OERT4	1880	X.16

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SERIES LABEL	DESCRIPTION	QTR	MON	ANN	UNITS	SOURCE	VARF	EQUIB
967	XIPF				1970=100	CERT4	878	X.1A
954	XIPP				1970=100	CERT4	790	X.1A
956	XISO				1970=100	CERT4	868	X.17
296	XITOT				1970=100.	CERT3	0768	X.1
860	XRGVO				1966=100	GOG	3491	U.1-5
856	XMETGVO				1966=100	GOG	3491	U.1-1
866	XFCGVO				1966=100	GOG	3511.1-1	
871	XOBGVO				1966=100	GOG	3511.1-1	
865	APFGVO				1966=100	GOG	3541.1-1A	
858	XPFGVO				1966=100	GOG	3541.1-1	
79	XSEI				1966=100	GOG	3471	U.1-3
864	XSGGVO				1970=100.	730ER	338	X.5
792	XSGG9				1966=100	CCC	3531	U.1-9
869	ATCGVO				100000T	F40	315E	
870	ATCGVO				1966=100	GOG	3581.1-1A	
504	ATRADE				1966=100	GOG	3591.1-1A	
380	AT7R				1966=100	DER	928	X.4
994	XVAT8				1970=100	D-G	0918	X.3
148	YCFE29				B.CUR.R	GOG	2281.1-17	
605	ZD				1963=100	UNCTAD	192E	
93	ZUT8				B RUBLES	TRAN	1161	Z.4
460	ZFFG29				B.CUR.R.	NKH	117R	Z.A
181	ZP3				B.RUB	PRAVDA	119E	
579	ZFAK3				B RUBLES	73JEC393	1141	Z.4
461	ZPG3				B RUBLES	RAND/TRA	115B	Z.4
186	ZPPC29				B RUBLES	NKHOZ	116B	Z.7
183	ZPWC29				B R	73JEC393	180E	
187	ZPWR29				B R	73JEC393	180E	
185	ZPWS3				B R	73JEC393	181E	
518	ZP-SC3				B RUBLES	73JEC393	113B	Z.4
973	ZR3				B RUBLES	TRAN	1121	Z.2
465	ZAU3				B.COR.R.	TRAN	2231	Z.9
					B RUBLES	TRAN	110B	Z.1

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IV. Equations*

Equations are arranged by sector in the sector-order given above. Behavioral equations are written in the form used for estimation with the sample mean value of the dependent variable shown in parentheses beneath it. In some cases auxiliary variables have been defined below the equation in which they appear. Such auxiliary variables serve only this presentation purpose and do not have model variable numbers.

Figures in parentheses under coefficients are t-statistics; absence thereof implies extraneous estimate. R^2 is the multiple correlation coefficient (unadjusted for degrees of freedom); S.E. is the standard error of estimate and D.W. the Durbin-Watson statistic; D is the normal variate devised by Durbin to test for first order serial correlation in the presence of a lagged dependent variable.

Final equations were estimated by ordinary least squares using T.S.P. (Time Series Processor).⁺

* In the estimation of SOVMOD II, valuable research assistance was provided by Michael Marrese, Marc Jarsulic, and Marc Rubin.

⁺ We are indebted to Jean-Pierre LeMaitre for assistance in adapting this program to our data files.

N POPULATION AND EMPLOYMENT(N.1) NPOPU Urban Population

$$\frac{100 \cdot \text{NPOPU}}{\text{NPOP9}} = - \frac{78.13531}{(14.26)} + \frac{35.23935}{(26.67)} \text{QLT28}$$

(54.51)

$$+ \frac{1.07249}{(1.46)} \left(\frac{\text{IHS}}{\text{IHS}_{-1}} - 1. \right)_{-2}$$

$$+ \frac{0.01432}{(4.74)} \left\{ \frac{100 \cdot \text{WI\&}}{(\text{ZPWSC\&} + \text{ZPWS\&}) / (\text{NAT} / 10.3)} \right\}_{-2}$$

$$- \frac{2.69524}{(1.71)} \left\{ \left(\frac{\text{XAT}_{-1}}{\text{XATPK}_{-1}} + \frac{\text{XAT}_{-2}}{\text{XATPK}_{-2}} - 2. \right) / 2. \right\}$$

$R^2 = 0.998$ S.E. = 0.16
Sample Period 1960-1973

D.W. = 1.67

(N.2) NPOPR Rural Population

$$\text{NPOPR} \equiv \text{NPOP9} - \text{NPOPU}$$

(N.3) NMNA Nonagricultural Employment

$$\frac{.1 * \text{NMNA}}{(\text{NPOPU}_{-1} + \text{NPOPU}) / 2} = \frac{23.75604}{(12.25)} \text{QLT28} (1. - \text{Q69ON})$$

(56.13)

$$+ \frac{89.38518}{(12.96)} \text{Q69ON} + \frac{0.02757}{(1.72)} \left(\frac{\text{NPAB9} + \text{NPAB9}_{-1}}{\text{NPOP9} + \text{NPOP9}_{-1}} \right)$$

$$+ \frac{8.3782}{(1.37)} \left(\frac{\text{WI\&} / \text{PRC}}{\text{WI\&}_{-1} / \text{PRC}_{-1}} \right)$$

(N.3) NMNA Nonagricultural Employment, Continued

$$- 52.72211 \left\{ \frac{(NPOPU + NPOPU_{-1}) + (NPOPU_{-1} + NPOPU_{-2})}{(NPOPU_{-1} + NPOPU_{-2}) + (NPOPU_{-2} + NPOPU_{-3})} \right\}$$

(4.86)

$R^2 = 0.995$ S.E. = 0.24 D.W. = 1.44
Sample Period 1959-1973

(N.4) NMI Industrial Employment

$$\frac{100.NMI}{NMNA} = 0.92375 \left(\frac{100.NMI}{NMNA} \right)_{-1} - 0.00116 \left(\frac{100.NMC}{NMNA} \right)_{-1}$$

(16.63) (0.01)

(40.153)

$$+ 0.23506 \left(\frac{100.NMTC}{NMNA} \right)_{-1}$$

(1.37)

$$- 2.11470 \left(\frac{100.NMS}{NMNA} \right)_{-1} + 0.71934 \left(\frac{100.NMG}{NMNA} \right)_{-1}$$

(4.12) (4.37)

$$- 2.2286 \left(\frac{INA}{INA_{-1}} - 1. \right)$$

(2.89)

$R^2 = 0.997$ S.E. = 0.094 D.W. = 2.35
Sample Period 1957-1973 D. = 0.74

(N.5) NMC Construction Employment

$$\begin{aligned}
 \frac{100.NMC}{NMNA} &= 0.07432 \left(\frac{100.NMI}{NMNA} \right)_{-1} - 0.72402 \left(\frac{100.NMC}{NMNA} \right)_{-1} \\
 &\quad (0.87) \quad (4.52) \\
 &\quad (10.998) \\
 &\quad - 0.14580 \left(\frac{100.NMTC}{NMNA} \right)_{-1} \\
 &\quad (0.56) \\
 &\quad + 1.67705 \left(\frac{100.NMS}{NMNA} \right)_{-1} - 0.50598 \left(\frac{100.NMG}{NMNA} \right)_{-1} \\
 &\quad (2.13) \quad (2.01) \\
 &\quad + 3.35792 \left(\frac{INA}{INA} \right)_{-1} - 1. \\
 &\quad (2.84)
 \end{aligned}$$

$$\begin{aligned}
 R^2 &= 0.900 & S.E. &= 0.144 & D.W. &= 2.25 \\
 \text{Sample Period } 1957-1973 & & D. &= 0.69
 \end{aligned}$$

(N.6) NMTC Transport and Communications Employment

$$\begin{aligned}
 \frac{100.NMTC}{NMNA} &= 0.00854 \left(\frac{100.NMI}{NMNA} \right)_{-1} + 0.02394 \left(\frac{100.NMC}{NMNA} \right)_{-1} \\
 &\quad (0.23) \quad (0.35) \\
 &\quad (12.070) \\
 &\quad + 0.94521 \left(\frac{100.NMTC}{NMNA} \right)_{-1} \\
 &\quad (8.39) \\
 &\quad + 1.05191 \left(\frac{100.NMS}{NMNA} \right)_{-1} - 0.35967 \left(\frac{100.NMG}{NMNA} \right)_{-1}
 \end{aligned}$$

(N.6) NMTC Transport and Communications Employment, Continued

$$+ \frac{1.16270}{(2.29)} \left(\frac{INA}{INA_{-1}} - 1 \right)$$

$$R^2 = 0.989 \quad S.E. = 0.062 \quad D.W. = 2.01$$

$$\text{Sample Period 1957-1973} \quad D. = 0.02$$

(N.7) NMS Domestic Trade Employment

$$\frac{100.NMS}{NMNA} = \frac{0.0507}{(2.10)} \left(\frac{100.NMI}{NMNA} - 1 \right) + \frac{0.08538}{(1.88)} \left(\frac{100.NMC}{NMNA} - 1 \right)$$

$$(8.896)$$

$$- \frac{0.17491}{(2.35)} \left(\frac{100.NMTC}{NMNA} - 1 \right)$$

$$+ \frac{0.70146}{(3.15)} \left(\frac{100.NMS}{NMNA} - 1 \right) + \frac{0.07343}{(1.03)} \left(\frac{100.NMG}{NMNA} - 1 \right)$$

$$- \frac{0.83225}{(2.48)} \left(\frac{INA}{INA_{-1}} - 1 \right)$$

$$R^2 = 0.997 \quad S.E. = 0.041 \quad D.W. = 1.77$$

$$\text{Sample Period 1957-1973} \quad D. = 1.20$$

(N.8) NMG Services Employment

$$\frac{100.NMG}{NMNA} = -0.01470 \left(\frac{100.NMI}{NMNA} \right)_{-1} + 0.11300 \left(\frac{100.NMC}{NMNA} \right)_{-1} \\ (0.37) \quad (1.52)$$

(26.267)

$$+ 0.03348 \left(\frac{100.NMTC}{NMNA} \right)_{-1} - 0.18159 \left(\frac{100.NMS}{NMNA} \right)_{-1} \\ (0.27) \quad (0.50)$$

$$+ 1.03535 \left(\frac{100.NMG}{NMNA} \right)_{-1} - 2.27867 \left(\frac{INA}{INA}_{-1} \right)_{-1} \\ (8.83) \quad (4.14)$$

$$R^2 = 0.997 \quad S.E. = 0.067 \quad D.W. = 2.64 \\ \text{Sample Period 1957-1973} \quad D. = 1.51$$

(N.9) NMF Forestry Employment

$$\frac{100.NMF}{NMNA} = 0.009133 \left(\frac{100.NMI}{NMNA} \right)_{-1} - 0.063775 \left(\frac{100.NMC}{NMNA} \right)_{-1} \\ (0.68) \quad (2.53)$$

(0.606)

$$+ 0.094811 \left(\frac{100.NMTC}{NMNA} \right)_{-1} \\ (2.30)$$

$$+ 0.22939 \left(\frac{100.NMS}{NMNA} \right)_{-1} - 0.086497 \left(\frac{100.NMG}{NMNA} \right)_{-1} \\ (1.86) \quad (2.18)$$

(N.9) NMF Forestry Employment

$$+ 0.16160 \left(\frac{INA}{INA_{-1}} - 1 \right) \\ (0.87)$$

$$R^2 = 0.944 \quad S.E. = 0.023 \quad D.W. = 1.06 \\ \text{Sample Period 1957-1973}$$

(N.10) NMO Other Branch Employment

$$\frac{100.NMO}{NMNA} = - 0.029339 \left(\frac{100.NMI}{NMNA_{-1}} \right) + 0.24467 \left(\frac{100.NMC}{NMNA_{-1}} \right) \\ (0.46) \quad (2.03) \\ (1.010)$$

$$- 0.21841 \left(\frac{100.NMTC}{NMNA_{-1}} \right) \\ (1.11)$$

$$- 1.48453 \left(\frac{100.NMS}{NMNA_{-1}} \right) + 0.58859 \left(\frac{100.NMG}{NMNA_{-1}} \right) \\ (2.51) \quad (3.10)$$

$$- 0.96157 \left(\frac{INA}{INA_{-1}} - 1 \right) \\ (1.08)$$

$$R^2 = 0.900 \quad S.E. = 0.108 \quad D.W. = 1.09 \\ \text{Sample Period 1957-1973}$$

(N.11) NASK Agricultural Employment, State and Collective Farms

$$\frac{100.NASK}{(NPOPR+NPOPR_{-1})/2.} = 0.78311 \left[\frac{100.NASK}{(NPOPR+NPOPR_{-1})/2.} \right]_{-1}$$

(25.26)

$$+ 1.61122 \quad QLT28 - 0.27513 \quad QSH65 - 0.56095$$

$$(1.00) \quad (1.48) \quad (0.06)$$

$$- 0.25410 \quad JPS9 - 4.56542 \left(\frac{XAT_{-1}}{XATPK_{-1}} + \frac{XAT_{-2}}{XATPK_{-2}} - 2. \right) / 2.$$

$$(1.18) \quad (2.29)$$

$$R^2 = 0.813 \quad S.E. = 0.17 \quad D.W. = 1.68$$

$$\text{Sample Period } 1961-1973 \quad D. = 0.80$$

(N.12) NAPRV Agricultural Employment, Private

$$\frac{NAPRV}{NASK} = 0.46529 - 0.04081 \quad QSH65 - 0.00841 \quad JPS9$$

$$(24.24) \quad (7.79) \quad (1.61)$$

$$(0.4163)$$

$$- 0.96807 \left[\frac{NPOPU/NPOPR}{(NPOPU/NPOPR)_{-1}} - 1. \right]$$

$$(1.63)$$

$$R^2 = 0.895 \quad S.E. = 0.0063 \quad D.W. = 2.42$$

$$\text{Sample Period } 1959-1973$$

(N.13) NAT Total Agricultural Employment

$$\text{NAT} \equiv \text{NASK} + \text{NAPRV}$$

(N.14) NMIEP Employment, Electroenergy

$$\frac{100.\text{NMIEP}}{\text{NMI}} = -10.46001 + 0.04162 \left(\frac{100.\text{NMIMB}}{\text{NMI}} \right)_{-1} \\ (2.27) \quad (0.92) \\ (1.889)$$

$$+ 1.11504 \left(\frac{100.\text{NMIFM}}{\text{NMI}} \right)_{-1} \\ (3.86)$$

$$+ 0.02656 \left(\frac{100.\text{NMICM}}{\text{NMI}} \right)_{-1} + 0.59063 \left(\frac{100.\text{NMIPP}}{\text{NMI}} \right)_{-1} \\ (0.43) \quad (0.98)$$

$$- 0.07544 \left(\frac{\text{INA}}{\text{INA}_{-1}} - 1. \right) + 1.44683 \text{QLT28} \\ (0.21) \quad (1.08)$$

$$R^2 = 0.973 \quad \text{S.E.} = 0.036 \quad \text{D.W.} = 2.00 \\ \text{Sample Period 1957-1973}$$

(N.15) NMICP Employment, Coal Products

$$\frac{100.NMICP}{NMI} = 24.13197 + 0.05559 \left(\frac{100.NMIMB}{NMI} \right)_{-1} \\ (2.91) \quad (0.68) \\ (4.425)$$

$$+ 0.07455 \left(\frac{100.NMIFM}{NMI} \right)_{-1} \\ (0.14)$$

$$+ 0.02658 \left(\frac{100.NMICM}{NMI} \right)_{-1} + 3.28373 \left(\frac{100.NMIPP}{NMI} \right)_{-1} \\ (0.23) \quad (3.02)$$

$$+ 1.88254 \left(\frac{INA}{INA_{-1}} - 1. \right) - 6.90990 QLT28 \\ (2.87) \quad (2.87)$$

$R^2 = 0.997$ S.E. = 0.064 D.W. 2.30
Sample Period 1957-1973

(N.16) NMIPP Employment, Petroleum Products

$$\begin{aligned}
 \frac{100.NMIPP}{NMI} &= 4.76174 + 0.03752 \left(\frac{100.NMIMB}{NMI} \right)_{-1} \\
 (0.847) \quad (3.39) \quad (2.72) \\
 &- 0.24763 \left(\frac{100.NMIFM}{NMI} \right)_{-1} \\
 (2.81) \\
 &+ 0.02381 \left(\frac{100.NMICM}{NMI} \right)_{-1} + 0.06767 \left(\frac{100.NMIPP}{NMI} \right)_{-1} \\
 (1.27) \quad (0.37) \\
 &+ 0.20798 \left(\frac{INA}{INA_{-1}} - 1. \right) - 1.19394 QLT28 \\
 (1.88) \quad (2.94)
 \end{aligned}$$

$$\begin{aligned}
 R^2 &= 0.903 & S.E. &= 0.011 & D.W. &= 3.06 \\
 \text{Sample Period } 1957-1973 & & D. &= 3.35
 \end{aligned}$$

(N.17) NMIFM Employment, Ferrous Metallurgy

$$\begin{aligned}
 \frac{100.NMIFM}{NMI} &= 3.22183 + 0.01766 \left(\frac{100.NMIMB}{NMI} \right)_{-1} \\
 (4.446) \quad (0.90) \quad (0.50) \\
 &+ 0.77451 \left(\frac{100.NMIFM}{NMI} \right)_{-1} \\
 (3.44) \\
 &+ 0.06205 \left(\frac{100.NMICM}{NMI} \right)_{-1} - 0.46494 \left(\frac{100.NMIPP}{NMI} \right)_{-1} \\
 (1.29) \quad (0.99) \\
 &+ 0.17647 \left(\frac{INA}{INA_{-1}} - 1. \right) - 0.79103 QLT28 \\
 (0.62) \quad (0.76)
 \end{aligned}$$

$$\begin{aligned}
 R^2 &= 0.983 & S.E. &= 0.028 & D.W. &= 1.93 \\
 \text{Sample Period } 1957-1973 & & D. &= 0.39
 \end{aligned}$$

(N.18) NMINF Employment, Non Ferrous Metallurgy

$$\begin{aligned}
\frac{100.NMINF}{NMI} &= 14.82597 + 0.10362 \left(\frac{100.NMIMB}{NMI} \right)_{-1} \\
(2.559) \quad (6.04) \quad (4.30) \\
&- 0.24017 \left(\frac{100.NMIFM}{NMI} \right)_{-1} \\
&\quad (1.56) \\
&+ 0.00908 \left(\frac{100.NMICM}{NMI} \right)_{-1} - 0.50040 \left(\frac{100.NMIPP}{NMI} \right)_{-1} \\
&\quad (0.28) \quad (1.55) \\
&- 0.63786 \left(\frac{INA}{INA_{-1}} \right)_{-1} - 3.95831 QLT28 \\
&\quad (3.29) \quad (5.56)
\end{aligned}$$

$$R^2 = 0.990 \quad S.E. = 0.019 \quad D.W. = 1.79$$

Sample Period 1957-1973

(N.19) NMICH Employment, Chemical and Petrochemical

$$\begin{aligned}
\frac{100.NMICH}{NMI} &= -23.48491 + 0.08489 \left(\frac{100.NMIMB}{NMI} \right)_{-1} \\
(4.324) \quad (4.40) \quad (1.62) \\
&+ 2.07976 \left(\frac{100.NMIFM}{NMI} \right)_{-1} \\
&\quad (6.20) \\
&- 0.34042 \left(\frac{100.NMICM}{NMI} \right)_{-1} - 0.38575 \left(\frac{100.NMIPP}{NMI} \right)_{-1} \\
&\quad (4.77) \quad (0.55) \\
&+ 0.18963 \left(\frac{INA}{INA_{-1}} \right)_{-1} + 4.96972 QLT28 \\
&\quad (0.45) \quad (3.21)
\end{aligned}$$

$$R^2 = 0.998 \quad S.E. = 0.041 \quad D.W. = 1.97$$

Sample Period 1957-1973

(N.20) NMIMB Employment, Machine-Building and Metal-Working

$$\begin{aligned}
\frac{100.NMIMB}{NMI} &= 4.62478 + 0.76670 \left(\frac{100.NMIMB}{NMI} \right)_{-1} \\
(35.255) \quad (0.18) \quad (3.03) & \\
&- 0.24136 \left(\frac{100.NMIFM}{NMI} \right)_{-1} - 0.01610 \left(\frac{100.NMICM}{NMI} \right)_{-1} \\
&\quad (0.15) \quad (0.05) \\
&- 9.13096 \left(\frac{100.NMIPP}{NMI} \right)_{-1} + 0.96943 \left(\frac{INA}{INA_{-1}} - 1. \right) \\
&\quad (2.70) \quad (0.48) \\
&+ 3.55470 QLT28 \\
&\quad (0.48)
\end{aligned}$$

$$\begin{aligned}
R^2 &= 0.997 & S.E. &= 0.199 & D.W. &= 1.93 \\
\text{Sample Period } 1957-1973 & & & & D. &= *
\end{aligned}$$

(N.21) NMIFP Employment, Forest Products

$$\begin{aligned}
\frac{100.NMIFP}{NMI} &= 75.40619 + 0.16006 \left(\frac{100.NMIMB}{NMI} \right)_{-1} \\
(9.607) \quad (8.56) \quad (1.75) & \\
&- 2.51932 \left(\frac{100.NMIFM}{NMI} \right)_{-1} \\
&\quad (4.45) \\
&+ 0.54956 \left(\frac{100.NMICM}{NMI} \right)_{-1} - 2.29041 \left(\frac{100.NMIPP}{NMI} \right)_{-1} \\
&\quad (4.35) \quad (1.94) \\
&+ 1.13075 \left(\frac{INA}{INA_{-1}} - 1. \right) - 17.00851 QLT28 \\
&\quad (1.52) \quad (6.45)
\end{aligned}$$

$$\begin{aligned}
R^2 &= 0.998 & S.E. &= 0.075 & D.W. &= 1.98 \\
\text{Sample Period } 1957-1973 & & & & &
\end{aligned}$$

(N.22) NMIPA Employment, Paper and Pulp

$$\begin{aligned}
 \frac{100.NMIPA}{NMI} &= -0.33794 - 0.000855 \left(\frac{100.NMIMB}{NMI} \right)_{-1} \\
 (0.795) &\quad (0.24) \quad (0.06) \\
 &+ 0.085595 \left(\frac{100.NMIFM}{NMI} \right)_{-1} \\
 &\quad (0.98) \\
 &- 0.07519 \left(\frac{100.NMICM}{NMI} \right)_{-1} + 0.35700 \left(\frac{100.NMIPP}{NMI} \right)_{-1} \\
 &\quad (3.77) \quad (1.91) \\
 &- 0.04055 \left(\frac{INA}{INA_{-1}} - 1. \right) + 0.26434 \text{ QLT28} \\
 &\quad (0.33) \quad (0.63)
 \end{aligned}$$

$R^2 = 0.874$ S.E. = 0.012 D.W. = 2.19
Sample Period 1957-1973

(N.23) NMICM Employment, Construction Materials

$$\frac{100.NMICM}{NMI} = 9.12825 + 0.01611 \left(\frac{100.NMIMB}{NMI} \right)_{-1}$$

(6.407)

$$- 1.13350 \left(\frac{100.NMIFM}{NMI} \right)_{-1}$$

$$+ 0.88652 \left(\frac{100.NMICM}{NMI} \right)_{-1} + 2.08320 \left(\frac{100.NMIPP}{NMI} \right)_{-1}$$

$$+ 1.08117 \left(\frac{INA}{INA} - 1 \right)_{-1} - 1.57299 \text{ QLT28}$$

$$R^2 = 0.908 \quad S.E. = 0.088 \quad D.W. = 2.38$$

$$\text{Sample Period 1957-1973} \quad D = 1.01$$

(N.24) NMISG Employment, Soft Goods

$$\frac{100.NMISG}{NMI} = 11.64421 - 0.35485 \left(\frac{100.NMIMB}{NMI} \right)_{-1}$$

(16.18)

$$- 0.99600 \left(\frac{100.NMIFM}{NMI} \right)_{-1}$$

$$- 0.12314 \left(\frac{100.NMICM}{NMI} \right)_{-1} + 7.86867 \left(\frac{100.NMIPP}{NMI} \right)_{-1}$$

(N.24) NMISG Employment, Soft Goods, Continued

$$+ \frac{2.82151}{(1.69)} \left(\frac{INA}{INA_{-1}} - 1. \right) + 4.18015 \text{ QLT28} \\ (0.68)$$

$$R^2 = 0.966 \quad S.E. = 0.163 \quad D.W. = 1.91 \\ \text{Sample Period } 1957-1973$$

(N.25) NMIPF Employment, Processed Foods

$$\frac{100.NMIPF}{NMI} - \frac{5.7609}{(0.73)} - \frac{0.04514}{(0.59)} \left(\frac{100.NMIMB}{NMI} \right)_{-1} \\ (9.406)$$

$$+ \frac{1.94929}{(3.96)} \left(\frac{100.NMIMB}{NMI} \right)_{-1}$$

$$- \frac{0.33314}{(3.17)} \left(\frac{100.NMICM}{NMI} \right)_{-1} + \frac{3.63546}{(3.53)} \left(\frac{100.NMIPP}{NMI} \right)_{-1}$$

$$+ \frac{0.09462}{(0.15)} \left(\frac{INA}{INA_{-1}} - 1. \right) + 1.93847 \text{ QLT28} \\ (0.85)$$

$$R^2 = 0.965 \quad S.E. = 0.061 \quad D.W. = 2.13 \\ \text{Sample Period } 1957-1973$$

(N.26) NMINC Employment, Industry NCE (Residual Branch)

$$\frac{100.NMINC}{NMI} = - \frac{10.27373}{(0.25)} - \frac{0.90234}{(2.26)} \left(\frac{100.NMIMB}{NMI} \right)_{-1}$$

(3.863)

$$- \frac{0.50822}{(0.20)} \left(\frac{100.NMIFM}{NMI} \right)_{-1}$$

$$- \frac{0.72073}{(1.32)} \left(\frac{100.NMICM}{NMI} \right)_{-1} - \frac{4.93324}{(0.92)} \left(\frac{100.NMIPP}{NMI} \right)_{-1}$$

$$- \frac{7.80506}{(-2.43)} \left(\frac{INA}{INA_{-1}} - 1. \right) + \frac{15.73648}{(1.33)} QLT28$$

$R^2 = 0.814$ $S.E. = 0.315$ $D.W. = 2.13$
 Sample Period 1957-1973

(N.27) NIET Engineering - Technical Employees in Industry (End Year)

$$\text{NIET-NIET}_{-1} = 0.16841 \frac{\text{NEIND9}_{-1} + \text{NEIND9}_{-2}}{2} \\ (13.38) \quad (149.43)$$

$$- 159.08975 \text{ Q69ON} \\ (468)$$

$$+ 154.92920 \left\{ \frac{2 \cdot (\text{NIET}_{-1} - \text{NIET}_{-2})}{\text{NEIND9}_{-1} + \text{NEIND9}_{-2}} - 0.13589 \right\}$$

$$R^2 = 0.726 \quad \text{S.E.} = 32.39 \quad \text{D.W.} = 1.26 \\ \text{Sample Period 1958-1973}$$

(N.28) NTSPA Specialists Employed in Transport and Communications

$$\text{NTSPA-NTSPA}_{-1} = 0.48120 \left(\frac{\text{NETRA9}_{-1} + \text{NETRA9}_{-2}}{2} \right) \\ (36.28) \quad (46.57)$$

$$+ 43.69722 \left\{ \frac{2 \cdot (\text{NTSPA}_{-1} - \text{NTSPA}_{-2})}{\text{NETRA9}_{-1} + \text{NETRA9}_{-2}} - 0.49761 \right\}$$

$$R^2 = 0.895 \quad \text{S.E.} = 5.00 \quad \text{D.W.} = 1.60 \\ \text{Sample Period 1958-1973}$$

I Investment(a) Non-Agricultural Investment, Sector Equations(I.1a) IIN Capital Investment in Industry

$$\frac{IIN}{IIN_{-1}} - 1 = 0.06580 - 0.05812 Q6567 - 0.05178 Q69$$

$$(6.66) \quad (4.51) \quad (2.88)$$

$$(0.074)$$

$$+ 0.26201 GFI + 0.17407 GPG - 0.21017 GDF$$

$$(2.29) \quad (3.34) \quad (5.30)$$

$$R^2 = 0.851 \quad S.E. = 0.017 \quad D.W. = 1.27$$

Sample Period 1959-1973

Where

$$GFI \equiv \frac{IFAJ\&/PII_{-1}}{IFAJ\&_{-1}/PII_{-2}} - 1.$$

$$GPG \equiv \frac{ZPG\&/PII_{-1}}{ZPG\&_{-1}/PII_{-2}} - 1.$$

$$GDF \equiv \frac{BDN \&9/PIWH70}{BDN \&9_{-1}/PIWH70_{-1}} - 1.$$

(I.2a) ICRUB Capital Investment in Construction

$$\frac{ICRUB}{ICRUB-1} - 1. = -0.02216 \quad QFYP - 0.00726$$

$$(0.69) \quad (0.14)$$

(0.094)

$$+ 0.30240 \left(\frac{XAT}{XATPK} - 1. \right) + 1.97563 \quad GINA$$

$$(0.88) \quad (2.78)$$

$$R^2 = 0.593 \quad S.E. = 0.055 \quad D.W. = 2.71$$

Sample Period 1961-1973

Where

$$GINA \equiv \frac{INA}{INA-1} - 1.$$

(I.3a) ITRUB Capital Investment in Transport and Communications

$$\frac{ITRUB}{ITRUB-1} - 1. = 0.11595 - 0.03159 \quad QFYP - 0.07515 \quad Q6567$$

$$(6.44) \quad (1.69) \quad (3.15)$$

(0.092)

$$- 0.03214 \quad Q69 + 0.17208 \quad GFT - 0.27395 \quad GDF$$

$$(0.96) \quad (2.22) \quad (3.90)$$

$$R^2 = 0.750 \quad S.E. = 0.030 \quad D.W. = 1.86$$

Sample Period 1959-1973

(I.3a) ITRUB Capital Investment in Transport and Communications,
Continued

Where GDF defined above under (I.1a)

$$GFT \equiv \frac{IFTR\&9/PIT_{-1}}{IFTR\&9_{-1}/PIT_{-2}} - 1.$$

(I.4a) IHS Capital Investment in Housing

$$\frac{IHS}{IHS_{-1}} - 1. = 0.24476 - 0.00876 QT50 - 0.13795 Q6064 \\ (6.58) \quad (4.78) \quad (9.35) \\ (0.033)$$

$$- 0.03773 Q69 - 0.05105 GDF \\ (2.47) \quad (1.40)$$

$$R^2 = 0.940 \quad S.E. = 0.014 \quad D.W. = 2.36 \\ \text{Sample Period 1961-1973}$$

GDF defined above under (I.1a)

(I.5a) ISER Capital Investment in Services and Domestic Trade

$$\frac{\text{ISER}}{\text{ISER}_{-1}} - 1. = \frac{1.46506}{(3.84)} - \frac{0.02681}{(1.06)} \text{ QFYP} - \frac{0.36961}{(3.56)} \text{ QLT28} \\ (0.076)$$

$$- \frac{0.03311}{(0.71)} \text{ Q69} + \frac{0.55272}{(1.38)} \left(\frac{\text{XAT}}{\text{XATPK}} + \frac{\text{XAT}_{-1}}{\text{XATPK}_{-1}} - 2. \right) / 2.$$

$$- \frac{0.11793}{(1.29)} \text{ GDF}$$

$$R^2 = 0.701 \quad \text{S.E.} = 0.042 \quad \text{D.W.} = 1.99 \\ \text{Sample Period 1959-1973}$$

GDF defined above under (I.1a)

(I.6a) INA Capital Investment, Total Non-Agricultural

$$\text{INA} \equiv \text{IIN} + \text{ICRUB} + \text{ITRUB} + \text{IHS} + \text{ISER}$$

(b) Alternate Investment Model

Total Non-Agricultural Investment determined by equation (I.6b). Sectoral Investment determined by exogenous share variables in equations (I.1b) - (I.5b).

(b) Alternate Investment Model, Continued

$$(I.1b) \quad IIN \equiv IRII9 * INA / 100.$$

$$(I.2b) \quad ICRUB \equiv IRIC9 * INA / 100.$$

$$(I.3b) \quad ITRUB \equiv IRIT9 * INA / 100.$$

$$(I.4b) \quad IHS \equiv IRIH9 * INA / 100.$$

$$(I.5b) \quad ISER \equiv IRIS9 * INA / 100.$$

$$(I.6b) \quad INA \quad \text{Total Non-Agricultural Investment,}$$

$$\frac{INA}{INA_{-1}} - 1. = 0.07384 - 0.013095 QFYP - 0.02078 Q6567 \\ (5.14) \quad (0.81) \quad (1.01) \\ (0.069)$$

$$- 0.03235 Q69 + 0.14109 GPG - 0.13580 GDF \\ (1.14) \quad (1.80) \quad (2.38)$$

$$R^2 = 0.563 \quad S.E. = 0.026 \quad D.W. = 1.06 \\ \text{Sample Period 1959-1973}$$

GPG and GDF defined above under (I.1a)

(I.7) IA Capital Investment in Agriculture

$$\frac{IA}{IA_{-1}} - 1. = 0.05343 - 0.01262 QSH65 + 0.51819 GFA$$

(5.13) (0.79) (5.38)

(0.107)

$$- 0.17120 GDF + 0.37863 \left(\frac{XAT}{XATPK} - 1. \right)$$

(3.90) (3.61)

$$- 0.14341 \left(\frac{XAT}{XATPK} - 1. \right)_{-1}$$

(1.26)

$$R^2 = 0.908 \quad S.E. = 0.015 \quad D.W. = 2.12$$

Sample Period 1961-1973

GDF defined above under (I.1a)

Where

$$GFA \equiv \frac{IFAG\&4/PIA_{-1}}{IFAG\&9_{-1}/PIA_{-2}} - 1.$$

(I.8) IFAJ& Adjusted Finance for Centralized Capital Investment

$$\text{IFAJ\&} \equiv \text{IFIN\&9} - 4.9 \text{ QSH68}_{-1}$$

(I.9) ITOTAL Total New Capital Investment in the National Economy

$$\text{ITOTAL} \equiv \text{INA} + \text{IA}$$

(a) Branch Investment, Direct Functions

(I.10a) IIEP Capital Investment, Electroenergy

$$\begin{aligned} \frac{\text{IIEP}}{\text{IIEP}_{-1}} - 1 &= -0.00416 + 0.08811 \text{ QFYP} + 0.04703 \text{ Q6567} \\ &\quad (0.24) \quad (5.77) \quad (2.78) \\ &\quad (0.053) \end{aligned}$$

$$- 0.09926 \text{ Q69} + 0.27386 \text{ GFI} \\ (4.04) \quad (1.78)$$

$$\begin{aligned} R^2 &= 0.799 \quad S.E. = 0.021 \quad D.W. = 1.85 \\ \text{Sample Period} &1959-1973 \end{aligned}$$

GFI defined above under (I.1a).

(I.11a) IICP Capital Investment, Coal Products

$$\frac{IICP}{IICP_{-1}} - 1. = + 0.03618 + 0.04771 QFYP + 0.00816 Q6567$$

(2.29) (2.66) (0.38)

(0.033)

$$- 0.08948 Q69 - 0.28049 GDF$$

(3.28) (4.66)

$R^2 = 0.861$ S.E. = 0.025 D.W. = 1.62
Sample Period 1961-1973

GDF defined above under (I.1a).

(I.12a) IIPP Capital Investment, Petroleum Products

$$\frac{IIPP}{IIPP_{-1}} - 1. = 0.03409 + 0.05256 QFYP - 0.13867 Q69$$

(2.01) (3.28) (4.57)

(0.088)

$$+ 0.39909 GFI - 0.23682 GDF$$

(3.94) (3.46)

$R^2 = 0.800$ S.E. = 0.026 D.W. = 2.26
Sample Period 1961-1973

GFI and GDF defined above under (I.1a).

(I.13a) IIFM Capital Investment, Ferrous Metallurgy

$$\frac{IIFM}{IIFM_{-1}} - 1. = 0.16046 - 0.13377 QFYP - 0.09740 Q6567$$

(5.03) (3.20) (1.92)

(0.074)

$$- 0.06800 Q69 - 0.14867 GDF$$

(0.92) (1.00)

$$R^2 = 0.588 \quad S.E. = 0.068 \quad D.W. = 2.77$$

Sample Period 1959-1973

GDF defined above under (I.1a).

(I.14a) IINF Capital Investment, Non-Ferrous Metallurgy
And Industry NEC

$$\frac{IINF}{IINF_{-1}} - 1. = 0.04625 - 0.07858 Q6567 - 0.04462 Q69$$

(1.57) (1.54) (0.62)

(0.057)

$$+ 0.43727 GPG - 0.26357 GDF$$

(2.11) (1.77)

$$R^2 = 0.430 \quad S.E. = 0.069 \quad D.W. = 2.65$$

Sample Period 1959-1973

GPG and GDF defined above under (I.1a).

(I.15a) IICH Capital Investment, Chemicals and Petrochemicals

$$\frac{IICH}{IICH}_{-1} - 1 = 0.05286 + 0.16279 QSH65 - 0.13426 Q6567$$

(1.61) (3.71) (3.18)

(0.093)

$$+ 0.77878 GFI - 0.40080 GDF$$

(1.57) (2.47)

$R^2 = 0.838$ $S.E. = 0.058$ $D.W. = 2.26$
Sample Period 1961-1973

GFI and GDF defined above under (I.1a).

(I.16a) IIMB Capital Investment, Machine-Building and
Metal-Working

$$\frac{IIMB}{IIMB}_{-1} - 1. = 0.02103 - 0.02664 Q6567 + 0.07929 Q70$$

(0.64) (0.98) (1.96)

(0.103)

$$+ 0.40442 GPG + 0.35652 \left(\frac{IIMB}{IIMB}_{-1} - 1. \right)_{-1}$$

(3.17) (1.71)

(I.16a) IIMB Capital Investment, Machine-Building and
Metal-Working, Continued

$$R^2 = 0.747 \quad S.E. = 0.035 \quad D.W. = 2.34$$

$$\text{Sample Period 1961-1973} \quad D. = 1.04$$

GPG defined above under (I.1a)

(I.17a) IIFP Capital Investment, Forest Products

$$\frac{IIFP}{IIFP_{-1}} - 1. = 0.11348 + 0.02928 QFYP - 0.10974 Q6567$$

$$(4.77) \quad (1.25) \quad (3.72)$$

$$(0.057)$$

$$- 0.12625 Q69 - 0.28559 GDF$$

$$(3.10) \quad (3.32)$$

$$- 0.34833 \left(\frac{IIFP}{IIFP_{-1}} - 1. \right)$$

$$(2.04) \quad -1 \quad -1$$

$$R^2 = 0.791 \quad S.E. = 0.037 \quad D.W. = 2.49$$

$$\text{Sample Period 1959-1973} \quad D. = 1.26$$

GDF defined above under (I.1a).

(I.18a) IICM Capital Investment, Construction Materials

$$\frac{IICM}{IICM_{-1}} - 1. = 0.03871 - 0.08803 Q6264 + 0.14422 Q6869$$

(2.19) (2.60) (3.64)

(0.041)

$$R^2 = 0.721 \quad S.E. = 0.050 \quad D.W. = 2.46$$

Sample Period 1961-1973

(I.19a) IISG Capital Investment, Soft Goods

$$\frac{IISG}{IISG_{-1}} - 1. = 0.13957 - 0.11840 Q69 + 0.14302 GPG + 0.16856 Q66$$

(5.54) (2.48) (1.10) (3.43)

(0.098)

$$- 0.19383 GDF - 0.41625 \left(\frac{IISG}{IISG_{-1}} - 1. \right)_1$$

(2.03) (3.10)

$$R^2 = 0.803 \quad S.E. = 0.046 \quad D.W. = 1.15$$

Sample Period 1959-1973 D. = 1.93

GPG and GDF defined above under (I.1a).

(I.20a) IIPF Capital Investment, Processed Foods

$$\frac{IIPF}{IIPF_{-1}} - 1. = 0.05915 - 0.03897 Q6567 - 0.03907 Q69$$

(3.65) (1.39) (1.04)

(0.043)

$$+ 0.28097 GPG - 0.44939 GDF$$

(2.56) (5.57)

$$R^2 = 0.326 \quad S.E. = 0.036 \quad D.W. = 2.25$$

Sample Period 1961-1973

GPG and GDF defined above under (I.1a).

(b) Branch Investment, Share Equations

$$(I.10b) \quad IIEP \equiv IREP9 * IIN$$

$$(I.11b) \quad IICP \equiv IRCP9 * IIN$$

$$(I.12b) \quad IIPP \equiv IRPP9 * IIN$$

$$(I.13b) \quad IIFM \equiv IRFM9 * IIN$$

$$(I.14b) \quad IINF \equiv IRNF9 * IIN$$

$$(I.15b) \quad IICH \equiv IRCH9 * IIN$$

$$(I.16b) \quad IIMB \equiv IRMB9 * IIN$$

$$(I.17b) \quad IIFP \equiv IRFP9 * IIN$$

(b) Branch Investment, Share Equations, Continued

$$(I.18b) \quad IICM \equiv IRCM9 * IIN$$

$$(I.19b) \quad IISG \equiv IRSG9 * IIN$$

$$(I.20b) \quad IIPF \equiv IRPF9 * IIN$$

(I.21) I70T Change in Inventories, Domestic Trade

$$\begin{aligned} I70T = & 2.93819 - 0.10606 IS70T_{-1} + 0.05940 (CR-CRS-CRF) * \\ & (5.07) \quad (1.30) \quad (1.02) \\ (2.249) & \\ & + 0.29956 \{ (CR-CRS-CRF) * - (CR-CRS-CRF) - 0.45295 \} \\ & (1.66) \\ & + 0.10701 (XAT-XATPK_{-1} + 1.816) \\ & (1.89) \\ & - 0.25209 \left(\frac{100 BDN\&9}{PIWH70} - \frac{100 BDN\&9_{-1}}{PIWH70_{-1}} - 0.50432 \right) \\ & (1.50) \end{aligned}$$

$$R^2 = 0.711 \quad S.E. = 0.567 \quad D.W. = 1.82$$

Sample Period 1958-1972

$$\text{Where } X^* \equiv X_{-1} \left(.1 \frac{X_{-1}}{X_{-2}} + .4 \frac{X_{-2}}{X_{-3}} + .4 \frac{X_{-3}}{X_{-4}} + .1 \frac{X_{-4}}{X_{-5}} \right)$$

Projection from four previous growth rates.

(I.22) IS70T Stock of Inventories, Domestic Trade (End Year)

$$IS70T \equiv IS70T_{-1} + I70T$$

(I.23) I70NTA Change in Inventories, Non-Trade Non-Agricultural

$$I70NTA = -0.69281 - 0.42559 IS70NTA_{-1} + 0.18392 GNPNA^* \\ (0.28) \quad (2.40) \quad (2.56) \\ (6.156)$$

$$- 0.40307 (GNPNA^* - GNPNA - .87371) \\ (1.56)$$

$$+ 5.86858 Q66 \\ (2.83)$$

$$R^2 = 0.642 \quad S.E. = 1.952 \quad D.W. = 1.66 \\ \text{Sample Period 1958-1972}$$

Where X* defined above under (I.21)

(I.24) IS70NTA Stock of Inventories, Non-Trade Non-Agricultural (End-Year)

$$IS70NTA \equiv IS70NTA_{-1} + I70NTA$$

K CAPITAL(K.1) KITOT Industrial Basic Funds (Capital Stock) (Jan. 1)

$$KITOT_{+1} \equiv KITOT + KNDI$$

(K.2) KIA Adjusted Industrial Basic Funds (Jan. 1)

$$KIA_{+1} \equiv KITOT_{+1} - KIT589 - KIH629$$

(K.3) KNDI Industrial Capital Formation

$$KNDI + 0.05 KITOT = 1.09890 QFYP + 0.00886 IIN$$

(1.89) (0.03)

(22.197)

$$+ 0.3278 IIN_{-1} + 0.4327 IIN_{-2}$$

(16.57) (2.15)

$$+ 0.3234 IIN_{-3}$$

(1.66)

$$R^2 = .980 \quad S.E. = 1.119 \quad D.W. = 1.24$$

Sample Period 1959-1973

Distributed Lag: Quadratic, 4-Period, Zero-constrained
in 5th Period.

(K.4) KCR Construction Basic Funds (Jan. 1)

$$KCR_{+1} \equiv KCR + KNDC$$

(K.5) KNDC Construction Capital Formation

$$KNDC + 0.06 KCR = 0.33634 QPL5 + 0.93224 ICRUB \\ (2.008) \quad (2.06) \quad (19.22)$$

$$R^2 = .902 \quad S.E. = 0.335 \quad D.W. = 1.58 \\ \text{Sample Period 1958-1973}$$

(K.6) KTR Transport and Communications Basic Funds (Jan. 1)

$$KTR_{+1} \equiv KTR + KNDT$$

(K.7) KTA Adjusted Transport and Communications Basic Funds (Jan. 1)

$$KTA_{+1} \equiv KTR_{+1} + KIT589$$

(K.8) KNDT Transport and Communications Capital Formation

$$KNDT + 0.025 KTR = 2.48932 Q65 + 0.61840 (ITRUB + ITRUB_{-1}) \\ (7.571) \quad (4.73) \quad (56.73)$$

$$R^2 = .954 \quad S.E. = 0.513 \quad D.W. = 1.65 \\ \text{Sample Period 1959-1973}$$

(K.9) KTCUS Freight Car Utilization Rate

$$\text{KTCUS} = \begin{matrix} 182.425 \\ (35.46) \end{matrix} \text{QSH65} + \begin{matrix} 3.97263 \\ (9.42) \end{matrix} \text{QSH65} * \text{QT50} \\ (241.88)$$

$$+ \begin{matrix} 232.324 \\ (39.96) \end{matrix} (1. - \text{QSH65}) + \begin{matrix} 1.02710 \\ (3.56) \end{matrix} (1. - \text{QSH65}) * \text{QT50}$$

$$- \begin{matrix} 15.91244 \\ (3.24) \end{matrix} \left(\frac{\text{BDN\&9/PIWH70}}{\text{BDN\&9}_{-1}/\text{PIWH70}_{-1}} - 1. \right)$$

$$R^2 = 0.981 \quad \text{S.E.} = 2.23 \quad \text{D.W.} = 2.30 \\ \text{Sample Period 1958-1973}$$

(K.10.) KCOM Basic Funds, Domestic Trade (Jan. 1)

$$\text{KCOM}_{+1} \equiv \text{KCOM} + \text{KNCOM}$$

(K.11) KNCOM Capital Formation, Domestic Trade

$$\text{KNCOM} + 0.02 \text{KCOM} = \begin{matrix} 3.62055 \\ (9.29) \end{matrix} \text{Q65} + \begin{matrix} 2.19175 \\ (5.49) \end{matrix} \text{Q68} \\ (2.245)$$

(K.11) KNCOM Capital Formation, Domestic Trade, Continued

$$- \frac{1.93306}{(4.80)} Q69 + \frac{0.096837}{(17.80)} (ISER_{-1} + ISER_{-2})$$

$$R^2 = 0.940 \quad S.E. = 0.379 \quad D.W. = 1.39$$

Sample Period 1960-1973

(K.12) KHBF Basic Funds, Housing (Jan. 1)

$$KHBF_{+1} \equiv KHBF + KNDH$$

(K.13) KNDH Housing Capital Formation

$$KNDH + 0.02 KHBF = - \frac{0.61240}{(1.33)} QFYP + \frac{7.89835}{(8.83)} Q62$$

(11.179)

$$+ \frac{0.48786}{(39.18)} (IHS + IHS_{-1})$$

$$R^2 = 0.914 \quad S.E. = 0.815 \quad D.W. = 2.18$$

Sample Period 1960-1973

(K.14) KHA Adjusted Housing Basic Funds (Jan. 1)

$$KHA_{+1} \equiv KHBF_{+1} + \frac{7.84}{1.74} KIH \ 629$$

(K.15) KSER Basic Funds, Services (Jan. 1)

$$KSER_{+1} \equiv KSER + KNSER$$

(K.16) KNSER Services Capital Formation

$$KNSER + 0.02 KSER = \frac{0.63499}{(0.78)} QFYP + \frac{4.49012}{(2.95)} Q63$$

(8.839)

$$- \frac{4.41527}{(2.90)} Q70 + \frac{0.49879}{(19.46)} (ISER_{-3} + ISER_{-4})$$

$$R^2 = 0.890 \quad S.E. = 1.355 \quad D.W. = 1.15$$

Sample Period 1960-1973

(K.17) KAIR Agricultural Basic Funds (excl. Productive Livestock) (mid-year)

$$KAIR - 0.95 KAIR_{-1} = \frac{0.55756}{(6.45)} QPL7 + \frac{0.67846}{(48.16)} \left(\frac{IA + IA_{-1}}{2} \right)$$

$$R^2 = .976 \quad S.E. = 0.430 \quad D.W. = 1.82$$

Sample Period 1957-1972

- (K.18) KIF Industrial Capital, From Western Imports (End Year Value)

$$KIF \equiv 0.95 KIF_{-1} + 0.1 MIEIN\$_{-1} * PREX9 / (P599 / 1.1852)_{-1}$$

- (K.19) KIEP Basic Funds, Electroenergy (Jan. 1)

$$KIEP_{+1} \equiv KIEP + KNIEP$$

- (K.20) KNIEP Capital Formation, Electroenergy

$$KNIEP + 0.04 KIEP = - 0.21295 QFYP + 1.38961 IIEP \\ (0.59) \quad (1.13) \\ (3.432)$$

$$- 1.33388 (IIEP_{-1} + IIEP_{-2}) \\ (1.66)$$

$$+ 1.52319 (IIEP_{-3} + IIEP_{-4}) \\ (3.19)$$

$$R^2 = 0.880 \quad S.E. = 0.522 \quad D.W. = 2.34 \\ \text{Sample Period 1959-1973}$$

- (K.21) KICP Basic Funds, Coal Products (Jan. 1)

$$KICP_{+1} \equiv KICP + KNICP$$

(K.22) KNICP Capital Formation, Coal Products

$$\text{KNICP} + 0.03 \text{ KICP} = 0.11613 \text{ QFYP} - 0.30244 \text{ Q68} \\ (0.790) \quad (3.68) \quad (4.71)$$

$$+ 0.18559 \text{ (IICP} + \text{IICP}_{-1} + \text{IICP}_{-2}) \\ (37.04)$$

$$R^2 = 0.856 \quad \text{S.E.} = 0.060 \quad \text{D.W.} = 2.32 \\ \text{Sample Period 1959-1973}$$

(K.23) KIPP Basic Funds, Petroleum Products (Jan. 1)

$$\text{KIPP}_{+1} \equiv \text{KIPP} + \text{KNIPP}$$

(K.24) KNIPP Capital Formation, Petroleum Products

$$\text{KNIPP} - 0.025 \text{ KIPP} = - 0.44342 \text{ QFYP} - 0.60611 \text{ Q6567} \\ (1.471) \quad (2.59) \quad (2.81)$$

$$+ 0.23246 \text{ (IIPP} + \text{IIPP}_{-1} + \text{IIPP}_{-2}) \\ (15.84)$$

$$R^2 = 0.868 \quad \text{S.E.} = 0.315 \quad \text{D.W.} = 1.96 \\ \text{Sample Period 1959-1973}$$

(K.25) KIFM Basic Funds, Ferrous Metallurgy (Jan. 1)

$$\text{KIFM}_{+1} \equiv \text{KIFM} + \text{KNIFM}$$

(K.26) KNIFM Capital Formation, Ferrous Metallurgy

$$\text{KNIFM} + 0.05 \text{ KIFM} = \begin{matrix} 0.42263 \\ (2.263) \end{matrix} \quad (\text{IIFM} + \text{IIFM}_{-1} + \text{IIFM}_{-2})$$

$$R^2 = 0.736 \quad \text{S.E.} = 0.357 \quad \text{D.W.} = 2.16$$

Sample Period 1959-1973

(K.27) KICH Basic Funds, Chemicals and Petrochemicals (Jan. 1)

$$\text{KICH}_{+1} \equiv \text{KICH} + \text{KNICH}$$

(K.28) KNICH Capital Formation, Chemicals and Petrochemicals

$$\text{KNICH} + 0.04 \text{ KICH} = \begin{matrix} 0.66416 \\ (2.064) \end{matrix} \quad \text{QFYP}$$

$$+ \begin{matrix} 0.51752 \\ (12.60) \end{matrix} \quad (\text{IICH}_{-1} + \text{IICH}_{-2})$$

$$R^2 = 0.772 \quad \text{S.E.} = 0.476 \quad \text{D.W.} = 2.05$$

Sample Period 1959-1973

(K.29) KIMB Basic Funds, Machine-Building and Metal-Working (Jan. 1)

$$\text{KIMB}_{+1} \equiv \text{KIMB} + \text{KNIMB}$$

(K.30) KNIMB Capital Formation, Machine-Building and Metal-Working

$$\text{KNIMB} + 0.05 \text{ KIMB} = 0.23512 \text{ QFYP} + 0.79425 \text{ Q66}$$

$$(4.666) \qquad (1.25) \qquad (2.13)$$

$$+ 0.57407 \text{ (IIMB} + \text{IIMB}_{-1})$$

$$(40.40)$$

$$R^2 = 0.973 \quad \text{S.E.} = 0.361 \quad \text{D.W.} = 2.22$$

Sample Period 1959-1973

(K.31) KIFP Basic Funds, Forest Products (Jan. 1)

$$\text{KIFP}_{+1} \equiv \text{KIFP} + \text{KNIFP}$$

(K.32) KNIFP Capital Formation, Forest Products

$$\text{KNIFP} + 0.045 \text{ KIFP} = 0.07759 \text{ QFYP}$$

$$(1.034) \qquad (0.82)$$

$$+ 0.44045 \text{ (IIFP} + \text{IIFP}_{-1})$$

$$(17.39)$$

$$R^2 = 0.749 \quad \text{S.E.} = 0.183 \quad \text{D.W.} = 1.17$$

Sample Period 1959-1973

(K.33) KICM Basic Funds, Construction Materials (Jan.1)

$$\text{KICM}_{+1} \equiv \text{KICM} + \text{KNICM}$$

(K.34) KNICM Capital Formation, Construction Materials

$$\text{KNICM} + 0.04 \text{ KICM} = 0.18611 \text{ Q69} \\ (0.95) \\ (1.325)$$

$$- 1.24738 \text{ Q70} + 0.3480 \text{ IICM} \\ (6.57) \quad (1.51)$$

$$+ 0.3335 \text{ IICM}_{-1} + 0.2707 \text{ IICM}_{-2} \\ (22.62) \quad (2.12)$$

$$+ 0.1595 \text{ IICM}_{-3} \\ (1.28)$$

$$R^2 = 0.896 \quad \text{S.E. } 0.173 \quad \text{D.W.} = 1.57 \\ \text{Sample Period } 1959-1973$$

Distributed Lag estimation: Quadratic, 4-Period,
Zero-Constrained in
5th Period.

(K.35) KISG Basic Funds, Soft Goods (Jan. 1)

$$\text{KISG}_{+1} \equiv \text{KISG} + \text{KNISG}$$

(K.36) KNISG Capital Formation, Soft Goods

$$\text{KNISG} + 0.05 \text{ KISG} = 0.2546 \text{ IISG} + 0.5098 \text{ IISG}_{-1} \\ (0.39) \quad (1.91) \\ (1.015)$$

$$+ 0.4249 \text{ IISG}_{-2} \\ (0.88)$$

(K.36) KNISG Capital Formation, Soft Goods, Continued

$R^2 = 0.854$ $S.E. = 0.163$ $D.W. = 2.14$
 Sample Period 1959-1973

Distributed Lag estimation: Quadratic, 3-Period, Zero
 Constrained in 4th Period.

(K.37) KIPF Basic Funds, Processed Foods (Jan. 1)

$$KIPF_{+1} \equiv KIPF + KNIPF$$

(K.38) KNIPF Capital Formation, Processed Foods

$$KNIPF + 0.05 KIPF = 0.95911 Q61$$

(1.852) (3.63)

$$- 0.93297 Q62 + 0.1094 IIPF$$

(3.25) (0.22)

$$+ 0.4942 IIPF_{-1} + 0.4577 IIPF_{-2}$$

(2.53) (1.27)

$R^2 = 0.890$ $S.E. = 0.234$ $D.W. = 1.52$
 Sample Period 1959-1973

Distributed Lag estimation: Quadratic, 3-Period,
 Zero-constrained in
 4th Period.

(K.39) KSUM Basic Funds, National Economy (Mean Year)

$$KSUM \equiv KAIR + \frac{1}{2} (KIA + KCR + KTA + KCOM + KHA + KSER)_{+1}$$

$$+ \frac{1}{2} (KIA + KCR + KTA + KCOM + KHA + KSER)$$

(K.40) KIPPF Basic Funds, Petroleum Products, World Imports

$$KIPPF \equiv 0.95 KIPPF_{-1} + 0.1 \left(\frac{MTM12\&}{P599/1.1852} \right)_{-1}$$

(K.41) KICHF Basic Funds, Chemicals and Petrochemicals, Western Imports

$$KICHF \equiv 0.95 KICHF_{-1} + 0.1 \left(\frac{MIECH\$*PREX9}{P599/1.1852} \right)_{-1}$$

(K.42) KIMBF Basic Funds, Machine-Building, World Imports

$$KIMBF \equiv 0.95 KIMBF_{-1} + 0.1 \left(\frac{MTM10\&}{P599/1.1852} \right)_{-1}$$

A OTHER AGRICULTURAL VARIABLES

$$\text{Define RXA} \equiv \frac{\text{XAT}}{\text{XATPK}} - 1.$$

(A.1) ALVR Livestock (Value in 1965 Rubles)

$$\frac{\text{ALVR}}{\text{ALVR}} - 0.95 = - \frac{0.12038}{(1.29)} - \frac{0.00879}{(4.05)} \text{QT50}$$

$$(0.064)$$

$$+ \frac{0.16540}{(1.58)} \frac{\text{XACTOAL9}_{-1}}{1000. \text{ALVR}_{-1}} + \frac{0.61302}{(2.66)} \frac{\text{KWAL9}_{-1}}{100.}$$

$$+ \frac{0.26799}{(1.60)} \left(\frac{\text{RXA}_{-1} + \text{RXA}_{-2}}{2.} \right)$$

$$R^2 = 0.777 \quad \text{S.E.} = 0.014 \quad \text{D.W.} = 2.46$$

Sample Period 1959-1972

(A.2) AACI Index of Agricultural Current Purchases

$$\frac{\text{AACI}}{\text{AACI}} - 1. = \frac{0.10286}{(5.78)} - \frac{0.00191}{(2.00)} \text{QT50} + \frac{0.04577}{(2.68)} \text{Q65}$$

$$(0.074)$$

$$+ \frac{0.18955}{(2.22)} \text{RXA} - \frac{0.22840}{(1.44)} \left(\frac{\text{RXA}_{-1} + \text{RXA}_{-2}}{2.} \right)$$

$$R^2 = 0.799 \quad \text{S.E.} = 0.014 \quad \text{D.W.} = 1.63$$

Sample Period 1959-1972

X PRODUCTION(X.1) XITOT Industrial Output Index

Cobb-Douglas production functions with labor elasticity constrained to 0.560. No technical progress terms included.

Sample Period 1961-1972.

Define the following dependent variable:

$$LXIC \equiv \ln XITOT - 0.560 \{0.845 \ln (NMI-NIET) + 0.155 \ln NEET\} \\ (-1.1249)$$

(a) Capital Disaggregation, Dummy Variable Q6466 (ALT (6)=0)

$$LXIC = - \underset{(63.99)}{3.41112} - \underset{(6.35)}{0.01896} Q6466 + \underset{(7.04)}{0.22751} \ln \left(\frac{KIF+KIF_{-1}}{2} \right) \\ + \underset{(17.25)}{0.37416} \ln \left(\frac{KIA_{+1}+KIA}{2} - \frac{KIF+KIF_{-1}}{2} \right)$$

$$R^2 = 0.9996 \quad S.E. = 0.0043 \quad D.W. = 2.72$$

(b) Capital Disaggregation, No Dummy Variable (ALT (6)=1)

$$LXIC = - \underset{(27.48)}{3.38701} + \underset{(3.56)}{0.26306} \ln \left(\frac{KIF+KIF_{-1}}{2} \right) \\ + \underset{(7.14)}{0.35578} \ln \left(\frac{KIA_{+1}+KIA}{2} - \frac{KIF+KIF_{-1}}{2} \right)$$

$$R^2 = 0.997 \quad S.E. = 0.0100 \quad D.W. = 1.08$$

(c) Aggregate Capital Series, Dummy Variable Q6466 (ALT (5)=2)

$$\text{LXIC} = - \underset{(78.24)}{3.81454} - \underset{(3.22)}{0.02207} \text{Q6466} + \underset{(55.81)}{0.53136} \ln \left(\frac{\text{KIA}_{+1} + \text{KIA}}{2} \right)$$

$$R^2 = 0.997 \quad \text{S.E.} = 0.0101 \quad \text{D.W.} = 0.81$$

(d) Aggregate Capital Series, No Dummy Variable (ALT(6)=3)

$$\text{LXIC} = - \underset{(58.36)}{3.85139} + \underset{(41.39)}{0.53753} \ln \left(\frac{\text{KIA}_{+1} + \text{KIA}}{2} \right)$$

$$R^2 = 0.994 \quad \text{S.E.} = 0.0140 \quad \text{D.W.} = 0.51$$

(X.2) XCRUB Construction Activity, State Enterprises

$$\ln \text{XCRUB} = - \underset{(3.44)}{7.35112} + \underset{(6.74)}{1.07667} \ln \text{NMC} + \underset{(1.26)}{0.06603} \ln \left(\frac{\text{KCR}_{+1} + \text{KCR}}{2} \right)$$

$$+ \underset{(4.59)}{0.24571} \ln \text{XICM}$$

$$R^2 = 0.999 \quad \text{S.E.} = 0.012 \quad \text{D.W.} = 2.71$$

Sample Period 1958-1972

(X.3) XT7R Transport and Communications Index

$$\ln \text{XT7R} = - \underset{(3.16)}{3.11578} + \underset{(4.88)}{0.76397} \ln \left(\frac{\text{KTA}_{+1} + \text{KTA}}{2} \right)$$

(4.25)

(x.3) XT7R Transport and Communications Index, Continued

$$+ 0.14441 \ln \left(\frac{NTSPA + NTSPA_{-1}}{2.} \right)$$

(1.11)

$$+ 0.59203 \ln KTCUS$$

(3.20)

$R^2 = 0.999$ S.E. = 0.012 D.W. = 1.08
Sample Period 1958-1973

(X.4) XTRADE Domestic Trade Index

$$\ln XTRADE = - 0.88405 + 0.06606 \ln \left(\frac{KCOM_{+1} + KCOM}{2.} \right)$$

(2.04) (1.16)

(4.452)

$$+ 1.18384 \ln \frac{XILT + XILT_{-1}}{2.}$$

(8.74)

$R^2 = 0.996$ S.E. = 0.019 D.W. = 0.77
Sample Period 1960-1972

Where

$$XILT \equiv \frac{0.27744 XISG + .38796 XIPF}{(0.27744 + 0.38796)}$$

(1970 Value-Added Weights by Branch)

(X.5) XSER Services and Administration Output Index

$$\ln XSER = - 3.82213 + 0.73040 \ln NMG$$

(4.422) (1.16) (1.40)

$$+ 0.19967 \ln \frac{KHBF_{+1} + KHBF + KSER_{+1} + KSER}{2.}$$

(0.58)

$$R^2 = 0.994 \quad \text{S.E.} = 0.015 \quad \text{D.W.} = 1.97$$

Sample Period 1960-1972

$$\ln \text{XAT} = \ln \text{XATPK} + \text{LPRES}$$
$$\begin{aligned} \ln \text{ XATPK} &= 0.74658 + 0.40105 \ln \text{ KAIR} \\ (4.11) \quad & (0.68) \quad (16.37) \\ & + 0.48752 \ln \text{ NAT} - 0.05219 \text{ Q6465} \\ & (1.76) \quad (3.70) \end{aligned}$$

Actual LPRES is defined as

$\ln \text{ XAT} - (\text{fitted}) \ln \text{ XATPK}$ and obtained from:

$$\text{LPRES} = -0.04404 + 0.09305 \text{ JPS9} + 0.51957 \text{ JTW9} \\ (-0.032) \quad (6.52) \quad (5.38) \quad (3.74)$$

$$+ 1.60386 \left(\frac{\text{NAT}}{\text{SAI9}} - .39076 \right) + 0.07877 \text{Q6465}$$

(3.89) (4.17)

$R^2 = .878$ S.E. = 0.024 D.W. = 2.35
Sample Period 1959-1973

(X.7a) XIEP Branch Output Index: Electroenergy

$$\begin{aligned} \ln XIEP = & - 0.17125 + 0.61955 \ln KIEP \\ & (0.23) \quad (10.03) \\ & (4.208) \\ & + 0.40462 \ln NMIEP \\ & (2.71) \end{aligned}$$

$$R^2 = 0.996 \quad S.E. = 0.030 \quad D.W. = 0.70$$

Sample Period 1958-1973

(X.8a) XICP Branch Output Index: Coal Products

$$\begin{aligned} \ln XICP = & 2.42307 + 0.39983 \ln KICP \\ & (4.02) \quad (15.56) \\ & (4.497) \\ & + 0.11452 \ln NMICP \\ & (1.42) \\ & + 0.10095 \ln \left(\frac{NEMIN9 + NEMIN9_{-1}}{2} \right) \\ & (4.35) \end{aligned}$$

$$R^2 = 0.993 \quad S.E. = 0.011 \quad D.W. = 1.14$$

Sample Period 1958-1973

(X.9a) XIPP Branch Output Index: Petroleum Products

$$\begin{aligned} \ln XIPP - \frac{.667}{10.145} \ln NMIPP = & 3.00148 + 0.23498 \ln KIPPF \\ & (27.61) \quad (8.65) \\ & (3.968) \end{aligned}$$

$$+ 0.43336 \ln (XIPP - KIPPF)$$

(9.25)

$$R^2 = 0.997 \quad S.E. = 0.019 \quad D.W. = 1.35$$

Sample Period 1960-1973

(X.10a) XIFM Branch Output Index: Ferrous Metallurgy

$$\ln XIFM = \begin{matrix} 0.30635 \\ (0.19) \\ (4.330) \end{matrix} + \begin{matrix} 0.53367 \\ (8,67) \end{matrix} \ln KIFM$$

$$+ \begin{matrix} 0.36817 \\ (1.51) \end{matrix} \ln NMIFM$$

$$R^2 = 0.996 \quad S.E. = 0.019 \quad D.W. = 1.27$$

Sample Period 1958-1973

(X.11a) XINF Branch Output Index: Non-Ferrous Metallurgy

$$\ln XINF = \begin{matrix} -1.82145 \\ (1.31) \\ (4.242) \end{matrix} + \begin{matrix} 0.20921 \\ (2.08) \end{matrix} \ln \frac{IINF + IINF_{-1}}{2.}$$

$$+ \begin{matrix} 0.73740 \\ (3.04) \end{matrix} \ln NMINF$$

$$+ \begin{matrix} 0.08038 \\ (1.08) \end{matrix} \ln \left(\frac{NEMET9 + NEMET9_{-1}}{2.} \right)$$

$$+ \begin{matrix} 0.04501 \\ (5.02) \end{matrix} QT50$$

$$R^2 = 0.999 \quad S.E. = 0.011 \quad D.W. = 1.48$$

Sample Period 1958-1973

(X.12a) XICM Branch Output Index: Construction Materials

$$\ln XICM = - \frac{6.02570}{(2.34)} + \frac{0.08493}{(2.01)} \ln \frac{KICM_{+1} + KICM}{2}$$

(4.304)

$$+ \frac{1.29829}{(3.51)} \ln NMICM + \frac{0.02692}{(2.96)} QT50$$

$$R^2 = 0.993 \quad S.E. = 0.032 \quad D.W. = 0.96$$

Sample Period 1958-1973

(X.13a) XICH Branch Output Index: Chemicals & Petrochemicals

$$\ln XICH - \frac{3053}{8953} \ln NMICH = \frac{1.15104}{(5.19)} + \frac{0.49794}{(2.08)} \ln KICHF$$

(1.823)

$$+ \frac{0.22697}{(1.78)} \ln (XICH - KICHF)$$

$$R^2 = 0.980 \quad S.E. = 0.050 \quad D.W. = 0.44$$

Sample Period 1960-1973

(X.14a) XIMB Branch Output Index: Machine-Building & Metal-Working

$$\ln XIMB = \frac{1.05824}{(0.90)} + \frac{0.17078}{(0.88)} \ln NMIMB + \frac{0.16203}{(0.83)} \ln KIMBF$$

(4.374)

$$+ \frac{0.50608}{(1.93)} \ln (XIMB - KIMBF) - \frac{0.02081}{(1.45)} Q6466$$

$$R^2 = 0.998 \quad \text{S.E.} = 0.015 \quad \text{D.W.} = 2.08$$

Sample Period 1960-1973

$$\ln \text{XIFP} - \frac{4.343}{7.472} \ln \text{NMIFP} = -1.51307 + 0.43466 \ln \text{KIFP}$$

(30.91) (18.96)

(-0.605)

$$R^2 = 0.971 \quad \text{S.E.} = 0.026 \quad \text{D.W.} = 0.84$$

Sample Period 1960-1973

$$\ln \text{XIPA} = 0.34776 + 0.56182 \ln \text{NMIPA} + 0.11573 \ln \text{KIFP}$$

(1.15) (7.98) (1.50)

(4.346)

$R^2 = 0.9995$ S.E. = 0.008 D.W. = 2.03
Sampel Period 1960-1973

(X.17a) XISG Branch Output Index: Soft Goods

$$\begin{aligned} \ln XISG = & - 4.83933 + 0.19830 \ln KISG \\ & (1.82) \quad (3.66) \\ & (4.334) \\ & + 0.92222 \ln NMISG \\ & (2.94) \\ & + 0.27061 \ln XAT_{-1} - 0.08130 Q6567 \\ & (2.56) \quad (6.85) \end{aligned}$$

$R^2 = 0.995$ S.E. = 0.019 D.W. = 1.82
Sample Period 1958-1973

(X.18a) XIPF Branch Output Index: Processed Foods

$$\begin{aligned} \ln XIPF = & - 0.82716 + 0.41096 \ln KIPF \\ & (0.59) \quad (6.85) \\ & (4.351) \\ & + 0.41980 \ln NMIPF \\ & (2.29) \\ & + 0.21101 \ln XAT_{-1} \\ & (2.10) \end{aligned}$$

$R^2 = 0.996$ S.E. = 0.019 D.W. = 2.12
Sample Period 1958-1973

(X.19) XGR Grain Index, M. Metric Tons (Diamond Series)

(a) Link to Gross Agricultural Output (ALT (7) =0)

$$\ln XGR = 1.11803 \ln XAT + 0.08254 JPS9$$

(4.550) (323.90) (2.47)

$$+ 0.67223 J1W9 - 0.21716 Q65$$

(2.44) (3.95)

$$R^2 = 0.965 \quad S.E. = 0.051 \quad D.W. = 1.67$$

Sample Period 1959-1973 Fit $R^2 = 0.966$

1965 is an unusual year in that grain production fell sharply while animal products increased substantially. The net result is a slight increase in XAT for 1965.

(b) Direct Production Function (ALT (7) =1)

(i) $\ln XGR = \ln XGRPK + LGRES$

Where

XGRPK is a smoothed "normal" output measure constructed from XGR.

$$(ii) \quad \ln XGRP_K = - 0.24857 + 0.53782 \ln KAIR \\ (4.629) \quad (0.18) \quad (13.10)$$

$$+ 0.83028 \ln NASK \\ (2.25)$$

$R^2 = 0.989$ $S.E. = 0.020$ $D.W. = 0.37$
Sample Period 1959-1973

$$(iii) \quad LPRES = - 0.07125 + 0.11648 JPS9 \\ (-0.0790) \quad (4.27) \quad (2.94)$$

$$+ 1.50461 JTW9 - 0.19986 Q65 \\ (4.58) \quad (3.06)$$

$R^2 = 0.820$ $S.E. = 0.061$ $D.W. = 2.72$
Sample Period 1959-1973

The fit R^2 for the Direct Production Function is 0.963, slightly inferior to the Link Equation (a). The production function for grain differs slightly from that for gross agricultural output since only social sector employment is used and the dummy variable Q65 replaces the man/acre ratio (which was insignificant for grain).

Alternative Production Functions for Industrial Branches

When $ALTE(8) \neq 0$, the equations (X.7a) - (X.18a) are suppressed and the following equations used. These production functions include indexes of material inputs by branch, variables which may be exogenous ($ALTE(8)=1$) or endogenously determined in the U sector of the Model ($ALTE(8)=2, 3$ or 4).

The equation for chemicals and petrochemicals (X.13b) would not converge when material inputs were determined endogenously with the A Matrix. This was due to the high estimated elasticity with respect to material inputs (0.72) and the large diagonal coefficient in the A Matrix for that branch (0.30). Consequently, in the current version of SOVMOD II equation (X.13b) has been suppressed and equation (X.13a) is used for all determinations of output in the chemicals branch.

(X.7b) XIEP Branch Output Index: Electroenergy

$$\ln \text{XIEP} \begin{matrix} -.5811 \\ (3.760) \end{matrix} \begin{matrix} (1.226) \\ (8.875) \end{matrix} \ln \text{NMIEP} = 1.89904 + 0.62623 \ln \text{KIEP} \begin{matrix} (17.15) \\ (20.09) \end{matrix} \\ + 0.09585 \ln \frac{\text{UEP\&}}{\text{PMAT70}} \begin{matrix} (2.79) \end{matrix}$$

$$R^2 = 0.999 \quad \text{S.E.} = 0.012 \quad \text{D.W.} = 1.54 \\ \text{Sample Period 1960-1972}$$

(X.8b) XICP Branch Output Index: Coal Products

$$\ln \text{XICP} \begin{matrix} -.5435 \\ (1.795) \end{matrix} \begin{matrix} (3.579) \\ (5.057) \end{matrix} \ln \text{NMICP} = 0.58038 + 0.53764 \ln \text{KICP} \begin{matrix} (3.40) \\ (7.80) \end{matrix} \\ + 0.00931 \ln \frac{\text{UCP\&}}{\text{PMAT70}} \begin{matrix} (0.23) \end{matrix}$$

$$R^2 = 0.986 \quad \text{S.E.} = 0.014 \quad \text{D.W.} = 1.00 \\ \text{Sample Period 1960-1972}$$

(X.9b) XIPP Branch Output Index: Petroleum Products

$$\ln \text{XIPP} \begin{matrix} -.6125 \\ (4.071) \end{matrix} \begin{matrix} (.667) \\ (10.145) \end{matrix} \ln \text{NMIPP} = 3.10026 + 0.45686 \ln (\text{KIPP-} \begin{matrix} (11.08) \\ (4.11) \end{matrix} \text{KIPPF}) \\ + 0.18398 \ln \text{KIPPF} \begin{matrix} (8.30) \end{matrix} + 0.03297 \ln \frac{\text{UPP\&}}{\text{PMAT70}} \begin{matrix} (0.47) \end{matrix}$$

$$R^2 = 0.998 \quad \text{S.E.} = 0.017 \quad \text{D.W.} = 1.39 \\ \text{Sample Period 1960-1972}$$

(X.10b) XIFM Branch Output Index: Ferrous Metallurgy

$$\ln XIFM = 0.16526 + 0.39288 \ln KIFM + 0.44823 \ln NMIFM$$

(0.12) (6.00) (2.13)

(4.340)

$$+ 0.11424 \ln \frac{UME}{PMAT70}$$

(3.61)

$$R^2 = 0.998 \quad S.E. = 0.012 \quad D.W. = 1.70$$

Sample Period 1959-1972

(X.11b) XINF Branch Output Index: Non-Ferrous Metallurgy

$$\ln XINF = 0.61863 + 0.40584 \ln NMINF$$

(0.89) (3.58)

(4.246)

$$+ 0.07409 \ln \frac{UME}{PMAT70}$$

(1.65)

$$+ 0.06093 QT50$$

(11.62)

$$R^2 = 0.999 \quad S.E. = 0.011 \quad D.W. = 1.63$$

Sample Period 1959-1972

(X.12b) XICM Branch Output Index: Construction Materials

$$\ln XICM = 0.4853 \left(\frac{4.317}{6.989} \right) \ln NMICM = 1.23330$$

(2.076) (8.60)

$$+ 0.41264 \ln \frac{KICM_{+1} + KICM}{2}$$

(7.66)

$$+ 0.26243 \ln \frac{UCM}{PMAT70}$$

(4.14)

$$R^2 = 0.992 \quad S.E. = 0.025 \quad D.W. = 1.25$$

Sample Period 1959-1972

(X.13b) XICH Branch Output Index: Chemicals & Petrochemicals

$$\ln \text{XICH} - .4068 \left(\frac{3.053}{8.953} \right) \ln \text{NMICH} = 3.25399 + 0.02679 \ln \text{KICHF}$$

$$(3.228) \quad (8.44) \quad (0.10)$$

This equation was not used + 0.10566 \ln (KICH-KICF)
due to problems with convergence. (0.84)
Equation 13a was used instead.

$$+ 0.72230 \ln \frac{\text{UCH\&}}{\text{PMAT70}}$$

$$R^2 = 0.992 \quad \text{S.E.} = 0.037 \quad \text{D.W.} = 0.96$$

Sample 1960-1972

(X.14b) XIMB Branch Output Index: Machine-Building & Metal-Working

$$\begin{aligned} \ln \text{XIMB} &= 0.4469 \left(\frac{22.837}{40.575} \right) \ln \text{NMIMB} = 1.64252 + 0.13770 \ln (\text{KIMB} - \text{KIMBF}) \\ & \quad (2.022) \quad (1.87) \quad (0.53) \\ & \quad + 0.18610 \ln \text{KIMBF} \\ & \quad (1.13) \\ & \quad + 0.25559 \frac{\text{UMB\&}}{\text{PMAT70}} \\ & \quad (2.00) \end{aligned}$$

$$R^2 = 0.997 \quad \text{S.E.} = 0.015 \quad \text{D.W.} = 0.79$$

Sample Period 1960-1972

(X.15b) XIFP Branch Output Index: Forest Products

$$\begin{aligned} \ln \text{ XIFP } -0.4370 & \quad \left(\frac{4.843}{7.472} \right) \ln \text{ NMIFP } = 1.98777 + 0.16838 \ln \text{ KIFP} \\ & \quad (2.242) \quad \quad \quad (13.46) \quad \quad \quad (2.75) \\ & \quad \quad \quad + 0.32318 \ln \frac{\text{UF\&}}{\text{PMAT70}} \\ & \quad \quad \quad (4.35) \end{aligned}$$

$$R^2 = 0.984 \quad \text{S.E.} = 0.018 \quad \text{D.W.} = 1.18$$

Sample Period 1960-1972

(X.16b) XIPA Branch Output Index

$$\begin{aligned} \ln XIPA = & 1.23570 + 0.40438 \ln NMIPA + 0.47880 \ln KIFP \\ & (2.15) \quad (3.16) \quad (6.12) \\ (4.314) & \\ & + 0.31548 \ln \frac{UFP\&}{PMAT70} - 0.04329 Q6364 \\ & (5.30) \quad (3.51) \end{aligned}$$

$$R^2 = 0.999 \quad S.E. = 0.012 \quad D.W. = 1.97$$

Sample Period 1960-1972

(X.17b) XISG Branch Output Index: Soft Goods

$$\begin{aligned} \ln XISG = & -0.2813 + \left(1 - \frac{7.273}{27.774}\right) \ln KISG = -4.67276 - 0.07769 Q6567 \\ & (3.958) \quad (2.34) \quad (4.59) \\ & + 0.98962 \ln NMISG + 0.08054 \ln USG\& \\ & (3.45) \quad (0.81) \end{aligned}$$

$$R^2 = 0.976 \quad S.E. = 0.024 \quad D.W. = 1.23$$

Sample Period 1959-1972

(X.18b) XIPF Branch Output Index: Processed Foods

$$\begin{aligned} \ln XIPF = & -0.92633 + 0.05503 \ln KIPF + 0.42484 \ln NMIPF \\ & (0.94) \quad (0.64) \quad (2.99) \\ (4.358) & \\ & + 0.42966 \ln UPF\& \\ & (5.31) \end{aligned}$$

$$R^2 = 0.998 \quad S.E. = 0.012 \quad D.W. = 1.83$$

Sample Period 1959-1972

U MATERIAL INPUTS

This is an optional sector of SOVMOD II (Alternate (8)=2, 3 or 4) which computes material input indexes in current prices for 16 sectors using the I-O table balanced for the given year; the 16 sectors are listed in table 1 below. The vector of gross outputs X in the macromodel is first transformed into a simulated vector of gross value of outputs in current prices (XGVO) based to 1966=100.

$$(U.1-1,16) \quad XGVO_i \equiv RGX9_i * X_i \quad i = 1, 16$$

The exogenous RGX9 vector for each year 1959-1972 was computed from actual GVO and X observations. Sectoral GVO is moved by corresponding X variables, with two macro-model outputs being aggregated into one GVO variable for metallurgy and forest products (1970 Value-Added weights were used in the aggregation):

$$\text{Metallurgy} \quad XIFMNF \equiv \frac{8.575 XIFM + 4.193 XINF}{12.768}$$

$$\text{Forest Products} \quad XIFPPA \equiv \frac{7.472 XIFP + 1.254 XIPA}{8.726}$$

The GVO's of Industry NEC and Other Branches are moved by Aggregate Industrial Output and GNP, respectively.

This vector of GVO indexes is then converted to current rubles using levels from the 1966 I-O table:

$$XGVO\&_i \equiv CXG_i * XGVO_i \quad i = 1, 16$$

CXG is a vector of constant coefficients given in Table 1.

This vector $XGVO_{\&}$ is then used to determine material inputs by sector in three alternative ways. First, the B matrix corresponding to the balanced A matrix of the given year may be used directly to form a flow matrix $F_{\&}$ (Alterate(8)=2).

$$(UF-2) * \quad F_{\&ij} \equiv b_{ij} * XGVO_{\&i} \quad \begin{array}{l} i = 1, 16 \\ j = 1, 16 \end{array}$$

In the second alternative (Alternate (8)=3), a flow matrix is formed by multiplying each column of the A matrix by the corresponding element in $XGVO_{\&}$:

$$(U.1-17) \quad XGVO_{\&17} \equiv XVAT_{\&} \equiv RGXVA9 * GNP$$

$$F'_{\&ij} \equiv a_{ij} * XGVO_{\&j} \quad \begin{array}{l} i = 1, 16 \\ j = 1, 17 \end{array}$$

In this case, the row sum of materials requirements (including final demand) will not generally equal gross output. A distribution matrix \bar{B} (16,17) is then used to distribute those excess demands to obtain a new flow matrix:

$$(UF-3) * \quad F_{\&ij} \equiv F'_{\&ij} + \bar{b}_{ij} * (XGVO_{\&i} - \sum_{j=1}^{17} F'_{\&ij})$$

$$\begin{array}{l} i = 1, 16 \\ j = 1, 17 \end{array}$$

Although we have used the 1966 B matrix for \bar{B} , the model may be programmed to apply any specific distribution matrix \bar{B} .

In the third alternative which determines materials inputs endogenously (Alternate(8)=4), the procedure is identical to the second until the final distribution of excess demands. Here, the distribution scheme is a minimization of weighted A coefficient changes using a matrix \bar{B} of weights:

$$\begin{aligned}
 (\text{UF-4})^* \quad F_{ij} &\equiv F'_{ij} * (1. + D_{ij}) & i = 1, 16 \\
 & & j = 1, 17 \\
 \text{where } D_{ij} &\equiv \bar{b}_{ij} \frac{F'_{ij}}{R_i} (XGVO_{ij} - \sum_{j=1}^{17} F'_{ij}) \\
 R_i &\equiv \sum_{j=1}^{17} \bar{b}_{ij} (F'_{ij})^2
 \end{aligned}$$

Again, we have used the 1966 B matrix as weights for the minimization but the algorithm could be used with other weighting matrices.

When the A matrix is used (Alternate(8)=3 or 4), it is adjusted each iteration as coefficients change. Iterations cease not when the matrix converges but when model outputs and material inputs converge.

Material inputs delivered to each sector are computed by aggregating over each column:

$$UF_{\&j} \equiv \sum_{i=1}^{16} F_{\&ij} \quad j = 1, 16$$

Finally, this vector of material inputs in current rubles is converted to a vector of material input index values based to 1970=100.

$$(U.2-1,16) \quad U_{\&i} \equiv UF_{\&j} / CUF_j \quad j = 1, 16$$

CUF is a vector of constant coefficients based on the 1970 material inputs computed from actual GVO's and the balanced I-O matrix for 1970 and is given in Table 1.

* Starred equations are for reference only and are not counted as model equations.

TABLE 1.

NO.	SECTOR	CXG B. 1966 R. * 10. ⁻²	CUF B. 1970 R. * 10 ⁻²
1.	FMNF Metallurgy	0.21324581	0.23652038
2.	CP Coal Products	0.05413076	0.04650122
3.	PP Petroleum and Gas	0.05663796	0.05118781
4.	EP Electric Power	0.05895195	0.05002713
5.	MB Machine-Building & Metal-Working	0.54508163	0.48210769
6.	CH Chemicals & Petrochemicals	0.14197281	0.12792019
7.	FPPA Forest Products & Paper	0.12623556	0.10759606
8.	CM Construction Materials	0.10689850	0.08286788
9.	SG Soft Goods	0.44730625	0.45682106
10.	PF Processed Foods	0.60772925	0.74888594
11.	NC Industry NEC	0.10324238	0.06832763
12.	CG Construction	0.43312381	0.34587294
13.	AF Agriculture & Forestry	0.80061444	0.32588250
14.	TC Transport & Communications	0.19000031	0.05045913
15.	TD Domestic Trade	0.16150025	0.02810113
16.	OB Other Branches of Material Production	0.02928288	0.00641645

W WAGES(W.1) WI& Average Wage, Industry

$$DVWI - DVWI_{-1} = 0.39342 (28.1927 - DVWI_{-1}) - 0.48571 \\ (-0.127) \quad (4.07) \quad (4.76)$$

$$+ 1.77880 QWREF + 1.56531 Q61 \\ (5.91) \quad (4.55)$$

$$R^2 = 0.883 \quad S.E. = 0.326 \quad D.W. = 1.53 \\ \text{Sample Period 1959-1972}$$

Where

$$DVWI = \frac{10. WI\&/PRC_{-1}}{1766.28 XITOT/NMI} \quad \frac{(\text{real wage})}{(\text{average product})}$$

(W.2) WASK& Average Wage, State and Collective Farms

$$DVWA - DVWA_{-1} = 1.27835 (DHWA - DVWA_{-1}) - 0.74025 \\ (1.96) \quad (5.71) \quad (1.05)$$

$$R^2 = 0.731 \quad S.E. = 1.94 \quad D.W. = 1.95 \\ \text{Sample Period 1959-1972}$$

Where

$$DVWA = \frac{10. WASK\&/PRC_{-1}}{(XAT/NAT)_{-1}} \quad \frac{(\text{real wage})}{(\text{average product})_{-1}}$$

(W.2) WASK& Average Wage, State and Collective Farms, Continued .

$$DHWA = 2.78935 QT50 (1.-QSH68) + 54.50375 QSH68$$

(DVWA Fitted over 1959-1972)

(W.3) WC& Average Wage, Construction

$$\frac{WC\&}{WI\&} = 0.34269 QLT28 - 0.18268$$

(13.08) (1.91)

(1.0659)

$$R^2 = 0.924 \quad S.E. = 0.013 \quad D.W. = 1.62$$

Sample Period 1958-1973

(W.4) WTC& Average Wage, Transport and Communications

$$\frac{WTC\&}{WI\&} = 0.98313 \left(\frac{WTC\&}{WI\&} \right) + 0.02098 + 0.03188 Q61$$

(11.72) $WI\&_{-1}$ (0.26) (3.21)

(0.922)

$$R^2 = 0.922 \quad S.E. = 0.009 \quad D.W. = 2.15$$

Sample Period 1959-1973 $D. = 0.31$

(W.5) WS& Average Wage, Trade and Distribution

$$\frac{WS\&}{WGS\&} = 0.98957 \frac{(WS\&)}{(250.02)} + 0.07728 \frac{Q65}{(7.32)} - 0.01628 \frac{Q61}{(1.54)}$$

(0.708)

$$R^2 = 0.907 \quad S.E. = 0.010 \quad D.W. = 1.63$$

Sample Period 1959-1973 D. = 0.72

(W.6) WGS& Average Wage, Government and Services

$$\frac{WGS\&}{WI\&} = 1.00336 \frac{(WGS\&)}{(465.40)} + 0.02584 \frac{Q6162}{(4.51)}$$

(0.978)

$$R^2 = 0.934 \quad S.E. = 0.008 \quad D.W. = 1.77$$

Sample Period 1959-1973 D. = 0.46

Z INCOMES(Z.1) ZWU& Urban Workers Gross Earnings

$$\begin{aligned} \text{ZWU\&} &= 0.97565 \text{ ZWH\&} + 11.47676 (1. - \text{QSH65}) \\ & (85.871) \quad (352.30) \quad (8.23) \end{aligned}$$

$$\begin{aligned} &- 0.59859 \text{ QT50} * (1. - \text{QSH65}) \\ & (8.02) \end{aligned}$$

$$\begin{aligned} R^2 &= 1.000 \quad \text{S.E.} = 0.457 \quad \text{D.W.} = 0.83 \\ \text{Sample Period} &1958-1972 \end{aligned}$$

$$\begin{aligned} \text{Where ZWH\&} &\equiv (\text{NMI} * \text{WI\&} + \text{NMC} * \text{WC\&} + \text{NMTC} * \text{WTC\&} \\ &+ \text{NMS} * \text{WS\&} + \text{NMG} * \text{WGS\&}) / 10.^6 \end{aligned}$$

(Z.2) ZPWSC& State and Collective Farm Wage Payments

$$\text{ZPWSC\&} \equiv \text{NASK} * \text{WASK\&} / 10.^3$$

(Z.3) ZPWS& Income from Sale of Farm Products

$$\begin{aligned} \ln \text{ZPWS\&} &= - 3.44986 + 0.64368 (\ln \text{PAFC70} + \ln \text{XAT}) \\ & (2.032) \quad (6.90) \quad (10.94) \end{aligned}$$

$$\begin{aligned} &- 1.53755 \left(\frac{\text{XAT}}{\text{XATPK}} - 1 \right) - 0.21259 \text{ Q69} \\ & (4.69) \quad (3.39) \end{aligned}$$

$$\begin{aligned} R^2 &= .919 \quad \text{S.E.} = 0.056 \quad \text{D.W.} = 1.42 \\ \text{Sample Period} &1958-1972 \end{aligned}$$

(Z.4) ZP& Total Money Income

$$\begin{aligned} ZP\& \equiv ZWU\& + ZPWSC\& + ZPWS\& + ZWPC\&9 + ZPPC\&9 \\ &+ ZPWM\&9 + BPS\& \end{aligned}$$

(Z.5) ZPAK& Agricultural Income in Kind

$$\begin{aligned} \ln ZPAK\& = &- 1.94988 + 1.10702 \ln XAT \\ (2.533) & \quad (4.83) \quad (11.12) \end{aligned}$$

$$\begin{aligned} R^2 = .905 \quad S.E. = 0.055 \quad D.W. = 1.44 \\ \text{Sample Period 1958-1972} \end{aligned}$$

(Z.6) ZD Real Disposal Income

$$ZD \equiv 100. (ZP\& + ZPAK\& - TP\&)/PRC$$

(Z.7) Gross Profits, National Economy(a) Without Anticipation Term

$$\begin{aligned} ZPG\&/ZPG\&_{-1} = &1.09277 + 0.12996 Q6668 + 0.10389 Q70 \\ (1.114) & \quad (63.95) \quad (4.25) \quad (2.20) \end{aligned}$$

$$+ 0.39267 \left(\frac{XAT}{XATPK} - 1. \right) \\ (1.50)$$

$$\begin{aligned} R^2 = 0.745 \quad S.E. = 0.044 \quad D.W. = 2.19 \\ \text{Sample Period 1959-1973} \end{aligned}$$

(Z.7) Gross Profits, National Economy, Continued

(b) With Anticipation Term

$$\begin{aligned} \text{ZPG\&/ZPG\&}_{-1} &= 1.08931 + 0.14061 \text{ Q6668} + 0.11883 \text{ Q70} \\ (1.114) & \quad (62.16) \quad (4.31) \quad (2.38) \\ & + 0.38681 \left(\frac{\text{XAT}}{\text{XATPK}} - 1. \right) \\ & \quad (1.47) \\ & + 0.18028 \left(\frac{\text{ZFPG\&9}}{\text{ZPG\&}} - 1.127 \right) \\ & \quad (0.96) \end{aligned}$$

$$\begin{aligned} R^2 &= 0.766 \quad \text{S.E.} = 0.044 \quad \text{D.W.} = 2.24 \\ \text{Sample Period} &1959-1973 \end{aligned}$$

(c) With Residual Income Term

$$\begin{aligned} \text{ZPG\&/ZPG\&}_{-1} &= 1.06260 \text{ ZR\&/ZR\&}_{-1} - 0.42123 \text{ Q70} \\ (1.119) & \quad (93.26) \quad (9.91) \\ & - 0.25520 (\text{QSH67-QSH67}_{-1}) \\ & \quad (4.27) \end{aligned}$$

$$\begin{aligned} R^2 &= 0.790 \quad \text{S.E.} = 0.039 \quad \text{D.W.} = 1.42 \\ \text{Sample Period} &1959-1972 \end{aligned}$$

(Z.8) ZDT\& Amortization Funds, National Economy

$$\begin{aligned} \text{ZDT\&/ZDT\&}_{-1} &= 1.02532 + 0.07104 \text{ KSUM/KSUM}_{-1} \\ (1.124) & \quad (44.60) \quad (3.63) \\ & + 0.27301 \text{ Q63} + 0.03168 (\text{QSH67-QSH67}_{-1}) \\ & \quad (24.24) \quad (1.88) \end{aligned}$$

$$\begin{aligned} R^2 &= 0.984 \quad \text{S.E.} = 0.011 \quad \text{D.W.} = 1.45 \\ \text{Sample Period} &1959-1972 \end{aligned}$$

(Z.9) ZR& Income Residual

$$ZR\& \equiv PII * (GNP - ZD)/100. - TT\& - ZDT\&$$

P Prices

(P.1) PNF70 State Retail Price, Non-Food Goods

$$\frac{PNF70}{1+RTTD9} - \left(\frac{PNF70}{1+RTTD9} \right)_{-1} = -0.29527 + 2.10261 Q6668$$

(1.66) (4.52)

(0.260)

$$+ 0.11012 (PWIQN - \left(\frac{PNF70}{1+RTTD9} \right)_{-1})$$

(0.76)

$$R^2 = 0.837 \quad S.E. = 0.519 \quad D.W. = 1.70$$

Sample Period 1961-1972

Where

PWIQN \equiv K. WIQN (marked-up industrial wage)

$$WIQN \equiv \frac{100.WI\&}{1766.28 XITOT/(.001 NMI)}$$

$$K = - 0.41978 + 1.15080 QLT28 - 0.19918 QSH68$$

Estimated over sample period 1958-1972

(P.2) PIRF70 State Retail Price, Food Goods

$$\frac{PIRF70}{1+RTTD9} - \left(\frac{PIRF70}{1+RTTD9} \right)_{-1} = 0.64672 + 1.77265 Q6668$$

(2.20) (3.00)

(1.049)

(P.2) PIRF70 State Retail Price, Food Goods, Continued

$$+ 0.21488 \quad (.85 \text{ PWIQN} + .15 \text{ PAFC70}_{-1}) \\ (1.69) \\ - \left(\frac{\text{PIRF70}}{1 + \text{RTTD9}_{-1}} \right)$$

$R^2 = 0.551$ $\text{S.E.} = 0.882$ $\text{D.W.} = 2.05$
 Sample Period 1961-1972

(P.3) PAFC70 "Negotiated" Agricultural Price

(Food sold by collective farms to consumer cooperatives.)

$$\ln \text{PAFC70} - \ln \text{PAFC70}_{-1} = 0.03485 + 0.04370 \text{ Q6869} \\ (0.034) \quad (2.01) \quad (1.53)$$

$$- 0.02045 \frac{\text{MGRDW\$}}{\text{PGR9}} - 0.97120 \left(\frac{\text{XAT}_{-1}}{\text{XATPK}_{-1}} - 1. \right) \\ (3.35) \quad (4.62) \\ - 0.65908 (1. - \text{QSH65}) \left(\frac{\text{XAT}}{\text{XATPK}} - 1. \right) \\ (2.11)$$

$R^2 = 0.791$ $\text{S.E.} = 0.032$ $\text{D.W.} = 3.01$
 Sample Period 1961-1973

(P.4) PFCC Consumption Price, Food

$$\text{PFCC} = .875 \text{ PIRF70} + .125 \text{ PAFC70}$$

(P.5) PRC Consumption Price, Total

$$\text{PRC} = .60 \text{ PFCC} + .40 \text{ PNF70}$$

(P.6) PIWL70 Wholesale Price, Light Industry

$$\text{PIWL70} - \text{PIWL70}_{-1} = -0.25850 - 1.86950 Q67 + 0.75035 Q61$$

(-0.056) (0.98) (2.30) (0.93)

$$+ 0.10072 (\text{PWIQN} - \text{PIWL70}_{-1})$$

(1.70)

$$R^2 = .438 \quad \text{S.E.} = 0.775 \quad \text{D.W.} = 2.11$$

Sample Period 1958-1972

(P.7) PIWH70 Wholesale Price, Heavy Industry

$$\text{PIWH70} - \text{PIWH70}_{-1} = -0.45455 - 4.09088 Q61$$

(0.379) (1.41) (3.81)

$$+ 14.09091 Q67$$

(13.14)

$$R^2 = .957 \quad \text{S.E.} = 1.023 \quad \text{D.W.} = 1.77$$

Sample Period 1961-1972

(P.8) PII Investment Deflator, Industry

$$\text{PII} = 0.81500 \text{PXCON9} + 0.20588 \text{PIWH70}$$

(87.9) (13.42) (3.73)

$$R^2 = .934 \quad \text{S.E.} = 1.62 \quad \text{D.W.} = 0.36$$

Sample Period 1957-1972

(P.9) PIC Investment Deflator, Construction

$$PIC = 0.32125 PXCON9 + 0.68619 PIWH70$$

(91.1) (2.40)

$$R^2 = .727 \quad S.E. = 3.56 \quad D.W. = 2.13$$

Sample Period 1957-1972

(P.10) PIT Investment Deflator, Transport and Communications

$$PIT = 0.67878 PXCON9 + 0.32086 PIWH70$$

(87.0) (4.10)

$$R^2 = .699 \quad S.E. = 4.40 \quad D.W. = 0.34$$

Sample Period 1957-1972

(P.11) PIS Investment Deflator, Government, Trade, Services,
etc. (excl. Housing)

$$PIS = 0.78015 PXCON9 + 0.24469 PIWH70$$

(88.6) (11.04)

(3.81)

$$R^2 = .899 \quad S.E. = 1.88 \quad D.W. = 0.36$$

Sample Period 1957-1972

(P.12) PIHS Investment Deflator, Housing

$$\text{PIHS} = 0.82329 \text{ PXCON9} + 0.19220 \text{ PIWH70} \\ (87.3) \quad (19.76) \quad (5.08)$$

$$R^2 = .971 \quad \text{S.E.} = 1.11 \quad \text{D.W.} = 0.53 \\ \text{Sample Period 1957-1972}$$

(P.13) PIA Investment Deflator, Agriculture

$$\text{PIA} = 0.34481 \text{ PXCON9} + 0.06897 \text{ PIWH70} + 58.03934 \\ (93.5) \quad (22.19) \quad (3.00) \quad (30.86)$$

$$R^2 = .983 \quad \text{S.E.} = 0.410 \quad \text{D.W.} = 1.16 \\ \text{Sample Period 1957-1972}$$

C Consumption(C.1) CR Total Consumption(C.1a) Identity Determination

$$CR \equiv CRF + CRND + CRD + CRS$$

(C.1b) Direct Determination

$$\frac{CR}{ZD} = 1.82930 - 0.34160 \frac{QLT28}{ZD} + 0.27182 \frac{XAT-1}{ZD}$$

(1.246) (3.04) (2.66) (1.37)

$$+ 1.36466 \left(\frac{.27744 \text{ XISG} + .38796 \text{ XIPF}}{ZD} \right)$$

(3.92)

$$R^2 = 0.977 \quad S.E. = 0.017 \quad D.W. = 1.97$$

Sample Period 1956-1972

(C.1c) Residual Determination

$$CR \equiv GNP + \frac{MTW70}{1000} - \frac{ETW70}{1000} - GRESEM - I70T$$

$$- I70NTA - ITOTAL - .17391 \text{ GIKREP}$$

$$- \left\{ \text{BAD\&} + \frac{6.954}{49.5} (\text{BSC\&} - \text{BNAUK\&}) \right\} / (.65 \frac{WG\&}{1246.8} + .35 \frac{PIWH70}{100})$$

(C.1c) Residual Determination, Continued

$$- (BD\&9 - BDN\&9) - \frac{100 \text{ BDN}\&9}{PIWH70}$$

$$- BNAUK\&/(.2 \frac{WG\&}{1246.8} + .8 \frac{PIWH70}{100})$$

(C.2) CRF Food Consumption(C.2a) Direct Determination

$$\frac{CRF}{ZD} = 1.67893 - 0.34206 \frac{ZD}{ZD-1} - 0.98667 \frac{PFCC}{PNF70}$$

(0.642) (5.47) (2.80) (4.21)

$$+ 0.24844 \frac{XAT}{ZD} + 0.62497 \frac{0.38796XIPF}{ZD}$$

(1.67) (1.87)

$$R^2 = 0.981 \quad S.E. = 0.013 \quad D.W. = 1.94$$

Sample Period 1956-1972

(C.2b) Share Determination

$$\frac{CRF}{CR} = 0.50614 \left(\frac{CRF}{CR} \right)_{-1} + 0.90761 \left(\frac{CRND}{CR} \right)_{-1}$$

(0.511) (2.89) (4.51)

$$- 0.81116 \left(\frac{CRD}{CR} \right)_{-1} + 1.25255 \left(\frac{CRS}{CR} \right)_{-1}$$

(1.04) (4.96)

$$- 0.19716 \frac{PFCC}{PNF70} + 0.03253 \left(\frac{XISG}{XISG-1} \right)_{-1}$$

(1.98) (0.74)

$$+ 0.10525 \frac{100BDN\&9/PIWH70}{ZD}$$

(0.92)

(C.2b) Share Determination, Continued

$$+ 0.05603 \left(\frac{INA}{INA_{-1}} - 1 \right) \\ (1.53)$$

$$R^2 = 0.991 \quad S.E. = 0.003 \quad D.W. = 2.30 \\ \text{Sample Period } 1957-1972 \quad D. = 0.84$$

(C.3) CRND Softgoods(C.3a) Direct Determination

$$\frac{CRND}{ZD} = 0.32920 + 0.26531 \frac{QT50}{100} - 0.29562 \frac{PFCC}{PNF70} \\ (0.276) \quad (4.32) \quad (2.81) \quad (3.43)$$

$$+ 1.15378 \frac{0.27744 \text{ XISG}}{ZD} \\ (8.94)$$

$$R^2 = 0.978 \quad S.E. = 0.003 \quad D.W. = 1.53 \\ \text{Sample Period } 1956-1972$$

(C.3b) Share Determination

$$\frac{CRND}{CR} = 0.26163 \left(\frac{CRF}{CR} \right)_{-1} + 0.61716 \left(\frac{CRND}{CR} \right)_{-1} + 0.72767 \left(\frac{CRD}{CR} \right)_{-1} \\ (0.222) \quad (2.11) \quad (4.33) \quad (1.32) \\ - 0.37389 \left(\frac{CRS}{CR} \right)_{-1} \\ (2.09)$$

(C.3b) Share Determination, Continued

$$+ 0.00548 \frac{\text{PFCC}}{\text{PNF70}} + 0.00453 \left(\frac{\text{XISG}}{\text{XISG}_{-1}} - 1. \right)$$

(0.08) (0.15)

$$- 0.18249 \frac{100.\text{BDN\&9/PIWH70}}{\text{ZD}}$$

(2.26)

$$- 0.00659 \left(\frac{\text{INA}}{\text{INA}_{-1}} - 1. \right)$$

(0.25)

$$R^2 = 0.936 \quad \text{S.E.} = 0.002 \quad \text{D.W.} = 1.96$$

Sample Period 1957-1972 D.W. = 0.10

(C.4) CRD Durables(C.4a) Direct Determination

$$\frac{CRD}{ZD} = - 1.42926 - 1.02849 \frac{QT50}{100} + 0.45360 \frac{QLT28}{ZD}$$

(0.067) (6.97) (5.90) (6.93)

$$+ 0.11033 \frac{0.40575 XIMB}{ZD} - 0.11888 \frac{100.BDN\&9/PIWH70}{ZD}$$

(1.92) (2.20)

$$R^2 = 0.990 \quad S.E. = 0.001 \quad D.W. = 1.65$$

Sample Period 1957-1972

(C.4b) Share Determination

$$\frac{CRD}{CR} = 0.018201 \left(\frac{CRF}{CR} \right)_{-1} - 0.150996 \left(\frac{CRND}{CR} \right)_{-1} + 0.760549 \left(\frac{CRD}{CR} \right)_{-1}$$

(0.055) (0.30) (2.19) (2.84)

$$- 0.110318 \left(\frac{CRS}{CR} \right)_{-1}$$

(1.28)

$$+ 0.069496 \frac{PFCC}{PNF70} - 0.007663 \left(\frac{XISG}{XISG-1} - 1. \right)$$

(2.04) (0.51)

$$- 0.030335 \frac{100 BDN\&9/PIWH70}{ZD}$$

(0.78)

$$- 0.017899 \left(\frac{INA}{INA-1} - 1. \right)$$

(1.43)

(C.4b) Share Determination, Continued

$$R^2 = 0.996 \quad S.E. = 0.001 \quad D.W. = 1.95$$

$$\text{Sample Period } 1957-1972 \quad D. = *$$

(C.5) CRS Services(C.5a) Direct Determination

$$\frac{CRS}{ZD} = -1.20889 - 1.02855 \frac{QT50}{100} + 0.40920 QLT28$$

$$(0.263) \quad (4.09) \quad (4.09) \quad (4.47)$$

$$+ 0.55668 \frac{.43808 XSER}{ZD}$$

$$(7.41)$$

$$R^2 = 0.962 \quad S.E. = 0.003 \quad D.W. = 1.84$$

$$\text{Sample Period } 1956-1972$$

(C.5b) Share Determination

$$\frac{CRS}{CR} = 0.21494 \left(\frac{CRF}{CR} \right) - 0.37376 \left(\frac{CRND}{CR} \right)_{-1} + 0.32307 \left(\frac{CRD}{CR} \right)_{-1}$$

$$(0.212) \quad (2.57) \quad (3.90) \quad (0.87)$$

$$+ 0.23163 \left(\frac{CRS}{CR} \right)_{-1}$$

$$(1.93)$$

(C.5b) Share Determination, Continued

$$+ \begin{array}{l} 0.12218 \\ (2.58) \end{array} \frac{\text{PFCC}}{\text{PNF70}} - \begin{array}{l} 0.04473 \\ (2.14) \end{array} \left(\frac{\text{XISG}}{\text{XISG}_{-1}} - 1. \right)$$

$$+ \begin{array}{l} 0.10758 \\ (1.98) \end{array} \frac{100.\text{BDN\&9/PIWH70}}{2D}$$

$$- \begin{array}{l} 0.03154 \\ (1.81) \end{array} \left(\frac{\text{INA}}{\text{INA}_{-1}} - 1. \right)$$

$$R^2 = 0.986 \quad \text{S.E.} = 0.001 \quad \text{D.W.} = 2.73$$

$$\text{Sample Period } 1957-1972 \quad \text{D.W.} = 1.66$$

T BUDGET REVENUES

$$DDF \equiv \frac{BD\&9}{BGN\&} - 0.132$$

Defense Share, Deviation from Mean

$$DPRC \equiv \frac{PRC}{PRC_{-1}} - 1.$$

Consumption Price Deflator, Rate of Change

$$ZW\& \equiv ZWU\& + ZPWSC\& + ZPWC\&9 \quad \text{Total Money Wage Income}$$

(T.1) TDP& Deductions from Gross Profits

$$\begin{aligned} \frac{TDP\&}{ZPG\&} &\approx 1.02793 \text{ RTDP9} + 1.60270 \text{ DDF} - 0.10077 \text{ Q68} \\ &\quad (0.731) \quad (69.84) \quad (2.49) \quad (2.46) \end{aligned}$$

$$R^2 = 0.780 \quad S.E. = 0.039 \quad D.W. = 1.30$$

Sample Period 1958-1972

(T.2) TT& Turnover Tax

$$\begin{aligned} \frac{TT\&}{ZW\&} &= 0.69335 (1. - QSH68) + 0.31965 \text{ QSH68} \\ &\quad (49.62) \quad (66.08) \\ &\quad (0.400) \end{aligned}$$

$$- 0.01895 (1. - QSH68) * QT50 + 0.95172 \text{ DPRC}_{-1}$$

(19.33) (4.25)

(T.2) TT& Turnover Tax, Continued

$$- 0.82918 \text{ DDF} \\ (4.28)$$

$$R^2 = 0.989 \quad S.E. = 0.008 \quad D.W. = 2.10$$

Sample Period 1958-1972

(T.3) TOSS& Other Revenues from Social Sector (including Social Insurance Deductions)

$$\frac{TOSS\&}{ZPG\&} = 0.47409 + 0.20879 Q6165 + 0.36882 Q5860 \\ (42.51) \quad (12.08) \quad (18.11)$$

(0.618)

$$R^2 = 0.968 \quad S.E. = 0.030 \quad D.W. = 2.96$$

Sample Period 1958-1972

(T.4) TSD& Social Insurance Deductions

$$\frac{TSD\&}{ZW\&} = 0.05720 + 0.00246 Q59$$

$$(311.48) \quad (3.45)$$

(0.057)

$$R^2 = 0.480 \quad S.E. = 0.001 \quad D.W. = 1.25$$

Sample Period 1958-1972

(T.5) TPOP& Taxes on the Population

$$\frac{TPOP\&}{ZWU\&} = 0.09193 + 0.02018 Q5859 - 0.01174 Q6467$$

$$(85.03) \quad (7.96) \quad (6.02)$$

(0.092)

$$R^2 = 0.915 \quad S.E. = 0.003 \quad D.W. = 1.52$$

Sample Period 1958-1972

(T.6) TP& Personal Taxes (for Disposable Income)

$$TP\& \equiv TPOP\& + TPA\&9$$

(T.7) TR& Total Revenues, State Budget

$$TR\& \equiv TDP\& + TT\& + TOSS\& + TPOP\&$$

B State Budget Outlays

$$DDF \equiv \frac{BD\&9}{BGN\&} - 0.132 \quad \text{Defense Share, Deviation from Mean}$$

$$DWG \equiv \frac{WGS\&}{WGS\&_{-1}} - 1.03536 \quad \text{Rate of Change of Government Wage, Deviation from Mean}$$

Q6768 Industrial Price Reform Dummy

Q65 Governmental Financial Reorganization

(B.1) BF& Financing of the National Economy

$$\frac{BF\&}{BF\&_{-1}} = 1.07119 - 0.11518 Q61 + 0.06875 Q6768 + 0.12432 Q70 \\ (107.82) \quad (3.35) \quad (2.71) \quad (3.61) \\ (1.081)$$

$$R^2 = 0.755 \quad S.E. = 0.033 \quad D.W. = 2.91 \\ \text{Sample Period 1959-1973}$$

(B.2) BSC& Social and Cultural Measures (including Science)

$$\frac{BSC\&}{BSC\&_{-1}} = 1.07203 + 0.07511 Q65 + 0.0381 Q68 \\ (439.73) \quad (8.23) \quad (4.20) \\ (1.080)$$

$$R^2 = 0.871 \quad S.E. = 0.009 \quad D.W. = 1.74 \\ \text{Sample Period 1959-1973}$$

(B.3) BNAUK& Science

$$\frac{BNAUK\&}{BNAUK\&-1} = 1.25618 - 0.008904 QT50$$

$$(63.24) \quad (7.86)$$

$$(1.105)$$

$$R^2 = 0.826 \quad S.E. = 0.019 \quad D.W. = 2.44$$

Sample Period 1959-1973

(B.4) BAD& Administration

$$\frac{BAD\&}{BAD\&-1} = 1.01199 + 0.16510 Q65 + 0.05381 Q6768$$

$$(85.58) \quad (3.91) \quad (1.74)$$

$$(1.033)$$

$$- 0.78529 DDF$$

$$(1.31)$$

$$R^2 = 0.638 \quad S.E. = 0.041 \quad D.W. = 1.71$$

Sample Period 1959-1973

(B.5) BRES& Expenditure Residual

$$\frac{BRES\&}{BGN\&} = 0.08371 - 0.002605 QT50 - 0.01610 Q63$$

$$(13.49) \quad (6.72) \quad (3.47)$$

$$(0.038)$$

$$- 0.01115 Q6768 + 0.005766 DWG - 0.20697 DDF$$

$$(3.86) \quad (1.41) \quad (1.96)$$

$R^2 = 0.932$ S.E. = .004 D.W. = 2.68
Sample Period 1958-1973

$$BGN\& = BF\& + BSC\& + BAD\& + BRES\& + BD\&9$$
$$\frac{\text{BPS\&}}{\text{BSC\&-BNAUK\&}} = \frac{0.49375}{(129.34)} + \frac{0.01005}{(1.75)} \text{ Q5861} - \frac{0.02438}{(4.72)} \text{ Q6368}$$

(0.487)

$R^2 = 0.787$ S.E. = 0.009 D.W. = 2.32
Sample Period 1958-1972

E Exports(E.1) ERMCM& Export of Raw Materials and Semifabricates to CMEA

$$\begin{aligned}
 100 \frac{ERMCM\&}{PERMCM9} &= -937.22 + 30.983 YCMEA9 \\
 &\quad (3.63) \quad (15.5) \\
 (3098) \\
 &\quad - 13.364 \left\{ 100 \left(\frac{PRMW9}{PTW9} - \frac{PRMW9-1}{PTW9-1} \right) \right. \\
 &\quad \quad \quad \left. - (PERMCM9 - PERMCM9-1) \right\}
 \end{aligned}$$

$$\begin{aligned}
 R^2 &= 0.964 \quad S.E. = 195 \quad D.W. = 1.23 \\
 \text{Sample Period } &1961-1973
 \end{aligned}$$

(E.2) EMACM& Exports of Machinery, to CMEA

$$\begin{aligned}
 EMACM\& &= - 712.392 + 0.658452 \quad ERMCM\& - 125.552 \quad Q4590 \\
 &\quad (10.65) \quad (26.57) \quad (4.65) \\
 (2674)
 \end{aligned}$$

$$\begin{aligned}
 R^2 &= 0.985 \quad S.E. = 66 \quad D.W. = 1.51 \\
 \text{Sample Period } &1960-1973
 \end{aligned}$$

(E.3) EGRCM& Exports of Grain, to CMEA

$$\begin{aligned}
 \frac{EGRCM&}{NPOP9} &= \frac{2,064.03}{(10.97)} + \frac{2,451.25}{(3.49)} * \left(\frac{XGR}{NPOP9} - \frac{XGRCM9}{NCM9} \right) \\
 (1.09) & \\
 &+ \frac{3.3278}{(3.80)} \left(\frac{XGR_{-1}}{NPOP9_{-1}} - \frac{XGRCM9_{-1}}{NCM9_{-1}} \right) \\
 &+ \frac{2.23734}{(2.99)} \frac{GRSTK}{NPOP9}
 \end{aligned}$$

$R^2 = 0.808$ S.E. = 0.14 D.W. = 2.29
 Sample Period 1960-1972

Where $GRSTK \equiv \sum_{I=1}^3 (XGR_{-I} - XGRPK_{-I})$

(E.4) ECOCM& Exports of Consumption Goods; other than Grain

$$\begin{aligned}
 ECOCM& &= \frac{178.607}{(2.42)} + \frac{7.49858}{(2.10)} XAT_{-1} - \frac{6.39453}{(1.80)} XGRCM9 \\
 (255) &
 \end{aligned}$$

$R^2 = 0.315$ S.E. = 37 D.W. = 0.91
 Sample Period 1960-1973

(E.5) ETCM& Total Exports to CMEA

$$\text{ETCM\&} \equiv \text{ERMCM\&} + \text{EMACM\&} + \text{EGRCM\&} + \text{ECOCM\&} + \text{EUSCM\&}_9$$

(E.6) ENETCM& Balance of Trade with CMEA

$$\text{ENETCM\&} \equiv \text{ETCM\&} - \text{MTCM\&}$$

(E.7) ENFDW\$ Non-food Exports to the Developed West

$$\begin{aligned} \frac{\text{ENFDW\$}}{\text{ENFDW\$}}_{-1} &= -0.07584 + .27125 \left(\frac{\text{MTDW\$} - \text{ENETDW\$}_{-1}}{\text{MTDW\$}_{-1}} - 1. \right) \\ &\quad + 1.27199 \left(\frac{\text{WTDW9}}{\text{WTDW9}_{-1}} \cdot \frac{\text{PENFDW9}}{\text{PENFDW9}_{-1}} - 1. \right) \end{aligned}$$

$$R^2 = .820 \quad \text{S.E.} = 0.083 \quad \text{D.W.} = 1.34$$

Sample Period 1961 - 1973

Revised 11/11/75

(E.8) EGRDW\$ Grain Exports to the DW

$$\begin{array}{rcl}
 \frac{100 \text{ EGRDW\$}}{\text{PGR9} \quad \text{NPOP9}} & = & 1.73703 - 3.88386 \quad \frac{\text{XGRWE9}}{\text{NWE9}} \\
 (0.217) & & (5.99) \quad (4.92) \\
 & + & 2.06302 \quad \frac{\text{GRSTK}}{\text{NPOP9}} \\
 & & (4.74)
 \end{array}$$

$$R^2 = 0.786 \quad \text{S.E.} = 0.091 \quad \text{D.W.} = 1.98$$

Sample Period 1960-1972

Where GRSTK is defined below (E.3)

(E.9) EFODW\$ Export of Food other than Grain to the DW

$$\begin{array}{rcl}
 \text{EFODW\$} & = & -125.30 + 3.5929 \quad \text{XAT}_{-1} \\
 (131) & & (3.19) \quad (5.37)
 \end{array}$$

$$R^2 = 0.724 \quad \text{S.E.} = 20 \quad \text{D.W.} = 1.02$$

Sample Period 1960-1972

(E.10) ETDW\$ Total exports to the Developed West

$$\text{ETDW\$} = \text{ENFDW\$} + \text{EGRDW\$} + \text{EFODW\$}$$

(E.11) ENETGR Net Balance of Grain Trade

$$\text{ENETGR} = 1.1111 \text{ EGRCM\$} + \frac{100.}{\text{PGR9}} (\text{EGRDW\$} + \text{EGRLCD\$} - \text{MGRDW\$})$$

Revised 11/11/75 Now an identity

(E.12) ENETDW\$ Balance of Trade with the DW

$$\text{ENETDW\$} = \text{ETDW\$} - \text{MTDW\$}$$

(E.13) ETLDC\$ Total Exports to the Less Developed Countries
(including grain EGR LDC\$)

$$\begin{aligned} \text{ETLDC\$} = & - 137.69 + 0.213556 * \text{WTLDC9} \\ & (1.54) \quad (3.63) \\ (1035) & \\ & + 0.339775 * \text{ETLDC\$}_{-1} \\ & (1.51) \end{aligned}$$

$$\begin{aligned} R^2 &= 0.954 & \text{S.E.} &= 93 & \text{D.W.} &= 2.07 \\ \text{Sample Period} & 1961-1973 & \text{D.} &= 0.22 \end{aligned}$$

(E.14) EGR LDC\$ Exports of Grain to the LDC's

$$\begin{aligned} \frac{\text{EGR LDC\$} * 100}{\text{NPOP9} * \text{PGR9}} &= 2.47943 + 1.42838 * \frac{\text{GRSTK}}{\text{NPOP9}} \\ & (2.09) \quad (2.42) \\ (0.33) & \\ & - 9.95524 * \frac{\text{XGR LDC9}_{-1}}{\text{NLDC9}_{-1}} \\ & (1.76) \end{aligned}$$

$$\begin{aligned} R^2 &= 0.404 & \text{S.E.} &= 0.12 & \text{D.W.} &= 1.57 \\ \text{Sample Period} & 1960-1972 \end{aligned}$$

where GRSTK see at Equ. (E.3)

(E.15) EOSC\$ Exports to Yugoslavia and the Far Eastern
Socialite Countries (except China and Cuba)

$$\begin{aligned} \text{EOSC\$} = & - 174.24 + 4.26099 * \text{WT9} + 0.38366 * \text{EOSC\$}_{-1} \\ & (2.94) \quad (2.69) \quad (1.44) \\ (690) & \end{aligned}$$

$$\begin{aligned} R^2 &= 0.970 & \text{S.E.} &= 62 & \text{D.W.} &= 1.80 \\ \text{Sample Period} & 1961-1973 & \text{D.} &= 1.35 \end{aligned}$$

(E.16) EMACH\$ Exports of Machinery to China

$$\text{EMACH\$} = 17.40668 + 0.35579 \text{ GNPCH9} - 39.3286 \text{ Q6870}$$

(0.48) (1.02) (2.84)

(44)

$$R^2 = 0.509 \quad \text{S.E.} = 20 \quad \text{D.W.} = 1.80$$

Sample Period 1962-1972

(E.17) EOCH\$ Exports of Other than Machinery to China

$$\text{EOCH\$} = - 9.2943 + 0.48417 \text{ EMACH\$}$$

(38) (0.56) (1.57)

$$+ 0.66898 \text{ EPOCH\$}_{-1}$$

(7.20)

$$R^2 = 0.898 \quad \text{S.E.} = 28 \quad \text{D.W.} = 2.83$$

Sample Period 1961-1973 D. = 1.66

(E.18) ETCH\$ Total Exports to China

$$\text{ETCH\$} = \text{EMACH\$} + \text{EOCH\$}$$

(E.19) ECUBA\$ Exports to Cuba

$$\text{ECUBA\$} = - 12.8513 + 3.71639 \text{ WT9} + 37.719 \text{ Q6263}$$

$$(0.26) \quad (12.38) \quad (0.96)$$

$$R^2 = 0.948 \quad \text{S.E. } 46 \quad \text{D.W.} = 0.93$$

(E.20) ETW\$ Exports to the World

$$\text{ETW\$} \equiv \text{ETDW\$} + \text{ETCM\&} \text{ PREX9} + \text{ETCH\$} + \text{EOSC\$}$$

$$+ \text{ECUBA\$} + \text{ETLDC\$} + \text{EUSW\$9}$$

(E.21) ETW70 Exports to the World at Domestic Constant Prices

$$\text{ETW70} \equiv 1.5 \frac{100 \text{ ETW\$}}{\text{PREX9 PTX9}}$$

M Imports

(M.1) MRMCM& Imports of Raw Materials and Semifabricates from CMEA

$$\frac{100 \text{ MRMCM\&}}{\text{PMRMCM9}} = 502.182 + 0.073422 \frac{100 \text{ ERMCM\&}}{\text{PERMCM9}}$$

(13.02) (5.81)

(717)

$$+ 0.13713 \text{ DEVMMACM\&}_{-1}$$

(1.97)

$$R^2 = 0.755 \quad \text{S.E.} = 42 \quad \text{D.W.} = 1.61$$

Sample Period 1960-1973

Where $\text{DEVMMACM\&} = \{\text{MMACM\&} - (-983.61 + 179.55 \text{ QT50})\}$

(M.2) MMACM& Imports of Machinery from CMEA

$$\text{MMACM\&} = -756.457 + 1.09899 \text{ ERMCM\&}$$

(2.50) (4.88) (19.09)

$$+ 1.714289 \text{ DEVEMACM\&}_{-1}$$

(3.10)

$$R^2 = 0.972 \quad \text{S.E.} = 145 \quad \text{D.W.} = 1.47$$

Sample Period 1960-1973

Where $\text{DEVEMACM\&} = \{\text{EMACM\&} - (-915.905 + 109.89 \text{ QT50})\}$

(M.3) MFOCM& Imports of Food from CMEA.

$$\text{MFOCM\&} = - \begin{matrix} 327.438 \\ (2.81) \end{matrix} + \begin{matrix} 6.62172 \\ (3.09) \end{matrix} \text{CRF} \\ (379)$$

$$+ \begin{matrix} 0.407572 \\ (1.91) \end{matrix} \text{MFOCM\&}_{-1}$$

$$R^2 = 0.971 \quad \text{S.E.} = 30 \quad \text{D.W.} = 2.15 \\ \text{Sample Period 1960-1972} \quad \text{D.} = 0.42$$

(M.4) MCOCM& Imports of Manufactured Consumer Goods from CMEA

$$\text{MCOCM\&} = - \begin{matrix} 253.2914 \\ (1.58) \end{matrix} + \begin{matrix} 12.8992 \\ (1.35) \end{matrix} \text{CRND} \\ (1010)$$

$$+ \begin{matrix} 0.20878 \\ (1.41) \end{matrix} \text{ENETCM\&}_{-1}$$

$$+ \begin{matrix} 0.81653 \\ (3.39) \end{matrix} \text{MCOCM\&}_{-1}$$

$$R^2 = 0.983 \quad \text{S.E.} = 60 \quad \text{D.W.} = 1.84 \\ \text{Sample Period 1960-1972} \quad \text{D.} = 0.58$$

(M.5) MTCM& Total Imports from CMEA

$$\text{MTCM\&} \equiv \text{MRMCM\&} + \text{MMACM\&} + \text{MFOCM\&} + \text{MCOCM\&} + \text{MUSCM\&}_9$$

(M.6) MNGDW\$ Imports Other Than Grain from the Developed West

$$\frac{100.MNGDW\$}{PMAW9} = -2803.8 + 47.80074 \text{ XITOT} +$$

(5.04) (9.75)

$$601.24 \left(\frac{PGOLD9 \cdot FGOLD + FSTK\$ - FDEBT\$}{MTDW\$} \right)_{-1}$$

(3.73)

$$R^2 = .955 \quad S.E. = 162. \quad DW = 1.64$$

Sample Period 1961 - 1973
Revised 11/11/75

(M.7) MMADW\$ Imports of Machinery from the DW

$$\frac{100.MMADW\$}{P71GE9_{-1}} = -621.19 + 61.98962IIN$$

(1.09) (3.68)

$$+197.984 \left(\frac{PGOLD9 \cdot FGOLD + FSTK\$ - FDEBT\$}{MTDW\$} \right)_{-1}$$

(1.17)

$$+69.596 \left(\frac{FDHC\$}{FDEBT\$} \right)_{-1} - 33.122 \frac{MGRDW\$}{PGR9}$$

(0.51) (1.08)

$$R^2 = 0.786 \quad S.E. = 170. \quad DW = 1.58$$

Sample Period 1961 - 1973
Revised 11/11/75

(M.8) MCODW\$ Imports of Consumer Goods other than Grain from the DW

$$\frac{MCODW\$}{MNGDW\$ - MUSDW\$9} = \frac{-0.221545}{(5.75)} + \frac{0.634093}{(2.10)} \quad \frac{CR - CR_{-1}}{CR_{-1}}$$

$$(0.0748)$$

$$+4.68463 \frac{CRD}{CR} - 0.11211 \frac{MGRDW\$}{MTDW\$}$$

(7.29) (2.01)

(M.8) MCODW\$ Imports of Consumer Goods other than Grain from the DW, Continued

$R^2 = 0.871$ S.E. = 0.020 DW = 1.77
Sample Period 1960 - 1972

(M.9) MRMDW\$ Imports of Raw Materials from the DW

$MRMDW\$ = MNGDW\$ - MMADW\$ - MCOLW\$ - MUSDW\9

(M.10) MGRDW\$ Imports of Grain from the DW

$$10^4 \cdot \left(\frac{MGRDW\$}{PGR9 \cdot GRAVE} + \frac{MGRDW\$_{-1}}{PGR9_{-1} GRAVE_{-1}} \right) = 133.01 - 1794.959 \left(\frac{GRSTK + GRSTK_{-1}}{GRAVE + GRAVE_{-1}} \right) \\ - 106.585 \left(\frac{PGOLD9 \cdot FGOLD + FSTK\$ - FDEBT\$}{MTDW\$} \right)_{-1}$$

(2.78) (-3.89)

$R^2 = .663$ S.E. = 79.6 DW = 2.04

$GRAVE = XGR + XGR_{-1} + XGR_{-2}$

Sample Period 1961 - 1973

Revised 11/11/75 (now a behavioral eq'n)

(M.12) MTLDC\$ Total Imports from the Less Developed Countries

$$\text{MTLDC\$} = - 99.3283 + 0.507074 \text{ ETLDC\$}$$

(1.43) (2.66)

(1064)

$$+ \frac{1538.13}{(3.78)} \left\{ \frac{\text{PRMW9}}{\text{PMAW9}} - \frac{\text{PRMW9}_{-1}}{\text{PMAW9}_{-1}} \right\}$$

$$- \frac{136.922}{(1.86)} Q67 + \frac{0.674961}{(3.23)} \text{MTLDC\$}_{-1}$$

$$R^2 = 0.989 \quad \text{S.E.} = 67 \quad \text{D.W.} = 2.04$$

Sample Period 1960-1973 D. = 0.11

(M.13) MOSC\$ Total Imports from Yugoslavia and the Far Eastern Socialist Countries (Except China)

$$\text{MOSC\$} = 95.07715 + 0.46756 \text{ EOSC\$}$$

(2.50) (9.33)

(418)

$$R^2 = 0.888 \quad \text{S.E.} = 57 \quad \text{D.W.} = 0.76$$

Sample Period 1961-1973

(M.14) MTCH\$ Imports from China

$$\text{MTCH\$} = - 3.81454 + 1.03969 \text{ ETCH\$} + 212.664 \text{ Q6164}$$

(0.30) (23.99) (11.14)

(259)

(M.14) MTCH\$ Imports from China, Continued

$R^2 = 0.987$ $S.E. = 31$ $D.W. = 3.01$
 Sample Period 1960-1972

(M.15) MCUBA\$ Imports from Cuba

$$100. \frac{MCUBA\$}{PSUGSU9} = 347.80 + 5.31084 \frac{XSUG9}{(2.10)} - 1 - 0.86734 \frac{WT9}{(1.69)} \\
(311) \quad - 213.32 \frac{PSUGW9}{(1.56) PSUGSU9}$$

$R^2 = 0.519$ $S.E. = 81$ $D.W. = 2.81$
 Sample Period 1960-1973

(M.16) MTW\$ Imports from the World

$$MTW\$ \equiv MTDW\$ + MTCM\$ + PREX9 + MTLDC\$ + MOSC\$ + MTCH\$ \\
+ MCUBA\$ + MUSW\$9$$

(M.17) MTW70 Imports from the World at Constant Domestic Prices

$$MTW70 \equiv 2.00 \frac{100 \text{ MTW\$}}{PREX9 \text{ PTM9}}$$

(M.18) MIEINS Imports from Developed West, Machinery and Equipment (less Transport Equipment)

$$\ln \frac{100.*MIEINS}{IIN*PMAW9_{-1}} = 3.16642 + 0.13621 \ln FLIQ_{-1} \\ (52.43) \quad (1.85) \\ (3.210) \\ - 0.31936 Q6466 + 0.02056 QSH68*QT50 \\ (3.20) \quad (3.10)$$

$$R^2 = 0.377 \quad S.E. = 0.114 \quad D.W. = 2.16 \\ \text{Sample Period 1961-1973}$$

(M.19) MTM10& Machinery Imports, Total, FTN10: Metal-Working

$$\ln \frac{100. MTM10\&}{IIMB*P71GE9_{-1}} = 3.95025 + 0.24639 \ln FLIQ_{-1} \\ (115.9) \quad (4.78) \\ (3.936) \\ + 0.60787 Q70 + 0.008716 QSH68*QT50 \\ (5.98) \quad (1.99)$$

$$R^2 = 0.886 \quad S.E. = 0.091 \quad D.W. = 1.78 \\ \text{Sample Period 1961-1972}$$

(M.20) MTM12& Machinery Imports, Total, FTN12: Mining, Metallurgy and Petroleum

$$\ln \frac{100.MTM12\&}{IIPP*P71GE9_{-1}} = 4.38313 + 0.19781 \ln FLIQ_{-1} \\ (59.70) \quad (3.68) \\ (4.334) \\ + 0.12809 QFYP \\ (1.40)$$

$$R^2 = 0.649 \quad S.E. = 0.158 \quad D.W. = 1.35 \\ \text{Sample Period 1961-1972}$$

(M.21) MIECH\$ Machinery Imports, West, Chemical Equipment

$$\ln \frac{100.MIECH\$}{IICH*P7IGE9_{-1}} = 4.74609 + 0.36499 \ln FLIQ_{-1}$$

(46.74) (2.75)

(4.454)

$$- 0.47258 QFYP + 0.01588 QSH68*QT50$$

(3.60) (1.54)

$R^2 = 0.666$ S.E. = 0.222 D.W. = 2.35
Sample Period 1961-1973

F Hard Currency(F.1) FNETHC Hard Currency Balance of Trade

$$\text{FNETHC\$} = - 60.7806 + 1.21162 \text{ ENETDW\$}$$

$$\quad \quad (1.45) \quad \quad (14.32)$$

$$(-434)$$

$$R^2 = 0.945 \quad \text{S.E.} = 123 \quad \text{D.W.} = 2.12$$

$$\text{Sample Period 1960-1973}$$

(F.2) FCREP\$ Credit Repayments

$$\text{FCREP\$} = 0.73024 + 0.28217 \text{ FCDR\$9}_{-1}$$

$$\quad \quad (0.05) \quad \quad (2.90)$$

$$(246)$$

$$+ 0.68156 \text{ FCREP\$}_{-1}$$

$$\quad \quad (3.10)$$

$$R^2 = 0.976 \quad \text{S.E.} = 28 \quad \text{D.W.} = 1.26$$

$$\text{Sample Period 1960-1973}$$

(F.3) FDEBT\$ Outstanding Debt

$$\text{FDEBT\$} \equiv \text{FDEBT\$}_{-1} + \text{FCDR\$9} - \text{FCREP\$}$$

(F.4) FINT\$ Interest Payments

$$\begin{array}{rcl} \text{FINT\$} = & - & 4.0578 \\ & (5.32) & + 0.055122 (\text{FDEBT\$} + \text{FDEBT\$}_{-1})/2 \\ & (41.9) & (76.97) \end{array}$$

$$R^2 = 0.998 \quad \text{S.E.} = 1.6 \quad \text{D.W.} = 1.96$$

Sample Period 1960-1972

(F.5) FDHC\$ Hard Currency Inflow (Balance of Payments)

$$\text{FDHC\$} \equiv \text{FNETHC\$} + \text{FSER\$9} + \text{FCDR\$9} + \text{FGSALES\$}$$

$$- \text{FINT\$} - \text{FCREP\$}$$

(F.6) FSTK\$ Hard Currency Holdings

$$\text{FSTK\$} \equiv \text{FSTK\$}_{-1} + \text{FDHC\$}$$

(F.7) FGSALES\$ Gold Sales

$$\begin{array}{rcl} \text{FGSALES\$} = & 263.274 & - 0.14013 \frac{\text{FNETHC\$} + \text{FNETHC\$}_{-1}}{2} \\ & (3.49) & (1.00) \\ & (261) & \end{array}$$

$$- 0.45661 (\text{FSTK\$} - \text{FGSALES\$})$$

(4.24)

(F.7) FGSALE\$ Gold Sales, Continued

$R^2 = 0.828$ $S.E. = 141$ $D.W. = 2.27$
Sample Period 1961-1973

(F.8) FGOLD Gold Reserves

$$FGOLD \equiv FGOLD_{-1} + XGOLD9 - \frac{FGSALE\$}{PGOLD9}$$

(F.9) FLIQ Liquidity Ratio

$$FLIQ = \frac{FGOLD PGOLD9 - FDEBT\$}{MTDW\$}$$

G AGGREGATE IDENTITIES AND BALANCES(G.1) GNPNA Non-agricultural Gross National Product

$$\text{GNPNA} \equiv 1.76628 \text{ XITOT} + 0.59943 \text{ XCRUB} + 0.34390 \text{ XT7R}$$

$$+ 0.17099 \frac{\text{XTRADE}}{1.156} + 0.43808 \text{ XSER}$$

(G.2) GNPA Agricultural Gross National Product

$$\text{GNPA} \equiv \text{XAT} - 11.230 \frac{\text{AACI}}{135.}$$

(G.3) GNP Gross National Product

$$\text{GNP} \equiv \text{GNPNA} + \text{GNPA}$$

(G.4) GIKREP Capital Repair

$$0.17391 \frac{\text{GIKREP}}{\text{KSUM}} = 0.02942 - 0.00021 \text{ QT50}$$

(52.21) (6.48)

$$R^2 = .792 \quad \text{S.E.} = 0.0004 \quad \text{D.W.} = 1.60$$

Sample Period 1960 - 1973

(G.5) GEUSUM End-Use Sum, Excluding Foreign Trade and Consumption

$$\begin{aligned}
 \text{GEUSUM} \equiv & \left\{ \text{BAD} + \frac{6.954}{49.5} (\text{BSC\&-BNAUK\&}) \right\} / \left(.65 \frac{\text{WGS\&}}{1246.8} + .35 \frac{\text{PIWH70}}{100.} \right) \\
 & + \text{BNAUK\&} / \left(.2 \frac{\text{WGS\&}}{1246.8} + .8 \frac{\text{PIWH70}}{100.} \right) \\
 & + (\text{BD\&9} - \text{BDN\&9}) + 100. \text{BDN\&9} / \text{PIWH70} \\
 & + \text{ITOTAL} + \text{I70T} + \text{I70NTA} + .17391 \text{ GIKREP}
 \end{aligned}$$

(Administration + Science + Defense + New Investment
+ Inventory Change + Capital Repair)

(G.6) GRESEM End-Use Residual

$$\begin{aligned}
 \text{GRESEM} = & \frac{0.03219}{(7.77)} \text{GNP} - \frac{1.25214}{(0.95)} \text{QSH65} \\
 & + \frac{0.50992}{(2.13)} (\text{XAT-XATPK})
 \end{aligned}$$

$R^2 = 0.634$ S.E. = 2.51 D..W = 2.20
Sample Period 1960 - 1972

Note: Actual Values for GRESEM defined by

$$\text{GRESEM} \equiv \text{GNP} + .001 (\text{MTW70} - \text{ETW70}) - \text{GEUSUM-CR}$$

$$(G.7) \text{ GSIMRES} \equiv \text{GNP} + .001 (\text{MTW70} - \text{ETW70}) - \text{GEUSUM}$$

$$- \text{CR} - \text{GRESEM}$$

NOTE: Actual values for GSIMRES are identically zero. Solution values represent the difference between "production" and "end use" determinations of GNP when consumption is not obtained by residual identity.

Appendix B

DOCUMENTATION FOR THE SRI-WEFA ECONOMETRIC MODEL OF THE SOVIET UNION

- SOVMOD III -

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APPENDIX B

DOCUMENTATION FOR THE

SRI-WEFA

ECONOMETRIC MODEL OF THE SOVIET UNION:

SOVMOD III

by

DONALD W. GREEN, GENE D. GUILL, PETER MIOVIC

I. Structure and Scale:

In its fully endogenous mode, the model consists of 189 stochastic relationships (behavioral and technical) and 106 identities arranged in the sectors given below. Each sector is identified by a single letter which is then used as the initial letter in the names of all variables determined in that sector.

<u>SECTOR IDENTIFIER</u>		<u>EQUATIONS</u>	
		<u>BEHAVIORAL</u>	<u>IDENTITY</u>
N	Population and Employment	27	3
I	Investment	20	6
K	Capital Formation	18	24
A	Other Agricultural Variables	3	
X	Production	28	1
U	Material Inputs		34
W	Wages	24	
Z	Incomes	5	5
P	Prices	12	2
C	Consumption	4	2
T	Budget Revenues	5	2
B	Budget Outlays	8	3
E	Exports	14	8
M	Imports	16	5
F	Hard Currency	4	5
G	Aggregate Identities & Balances	1	6
TOTAL		189	106

11. Simulation of SOVMOD III:

The model is encoded into a simulation program using the WEFA general model solution system SOLVEM.^{*/} This program has standard facilities to convert the status of any variable from endogenous to exogenous and to apply additive adjustments to any behavioral variable. In addition it has the facility to exogenize entire BLOCKS of equations. In SOVMOD III the equations have been grouped in the following way:

<u>BLOCK NUMBER</u>	<u>DESCRIPTION</u>	<u>CONSISTING OF SECTORS</u>
1 A	Population and Employment	N
2 B	Capital Formation	K
3 C	Production, Non-Agricultural	X.7-X.23
4 D	Wages, Incomes and Prices	W,Z,P
5 E	Investment	I
6 F	Consumption	C
7 G	State Budget	T,B
8 H	Foreign Sector	E,M,F
9 I	Aggregates	G
10 J	Material Inputs	U
11 K	Agriculture	A,X.1-X.6

Most of the simultaneity in the model occurs in Blocks 1-5 and 10-11; the other four Blocks are virtually post-recursive except for certain import equations (grain and machinery) in Block 8.

SOLVEM also has the facility to allow the user to select different alternatives of an equation or a set of equations, thus establishing different variants of the model. The alternative switches encoded in SOVMOD II are given on the following page where ZERO is the initial default option.

^{*/}The coding of SOVMOD III was done by Raymond Chien. We are indebted to George Schink and Bill Brown, the developers of SOLVEM, for guidance in using it for this model.

<u>ALTERNATE SWITCH NUMBER</u>	<u>SETTING</u>	<u>ALTERNATIVE</u>	<u>EQUATION NUMBERS</u>
ISECTOR	0	Non-agricultural investment by adding components.	I.1a-6a
	1	Non-agricultural investment by direct function (components by exogenous ratios).	I.1b-6b
IBRANCH	0	Industrial branch investment by direct function.	I.10a-I.20a
	1	Industrial branch investment determined from aggregate level by exogenous shares.	I.10b-I.20b
PROFIT	0	Gross profits, non-residual.	Z.9a
	1	Gross profits, residual income.	Z.9b
CTOTAL	0	Total consumption by adding components.	C.1a,C.6a or C.6b
	1	Total consumption by direct function.	C.1b,C.6b
	2	Total consumption by residual function.	C.1c,C.6b
	0	Consumption components by direct functions.	C.2a-C.5a
CSHARE	1	Consumption components by share functions.	C.2b-C.5b
	2	Output determination of services and share determination of non-services components.	C.2c-C.5c
XIND	0	Industrial output, aggregation identity.	X.19a
	1	Industrial output, no foreign capital stock.	X.19b
	2	Industrial output, foreign and domestic capital stocks.	X.19c
	0	Direct production functions for industrial branches using only primary inputs.	X.7a-X.18a
XFACT	1	Production functions using exogenous material input series from I-0 data.	X.7b-X.18b

<u>ALTERNATE SWITCH NUMBER</u>	<u>SETTING</u>	<u>ALTERNATIVE</u>	<u>EQUATION NUMBERS</u>
XFACT(con't)	2	Same production functions as ONE with material inputs determined endogenously with exogenous B matrix.	X.7b-X.18b
	3	Same production functions as ONE with material inputs given endogenously using B matrix determined by Hickman-Lau system.	X.7b-X.18b

Except in the form in which total consumption is residually determined (Alt. 4=TWO), GNP is determined both from the side of production (eq. G.3) and from the side of use (by adding components). The difference is a simulation residual defined in equation G.7.

III. Variables:

Variables in the model are contained in the attached alphabetical list; there are 295 endogenous and 164 exogenous variables.^{*/} The following naming conventions have been employed. The reader is urged to study these conventions prior to consulting the equations of the model as an understanding of them will greatly facilitate that process.

^{*/} There are six additional variables presently in SOVMOD III which are vestiges of SOVMOD II and are inoperative in the new model.

SYMBOLCONVENTIONInitial Symbol

Sector Symbols

Sector of model (see above list) in which endogenous variable is determined.

Q

Dummy or time trend variables (figures following generally denote year(s), e.g., Q65 is a dummy variable for 1965).

Final Symbol

9

Exogenous variable other than Q-type.

Embedded or Trailing Symbols

Industries

I	Industry
C	Construction
T	Transport and Communication
S	Domestic Trade
G	Government and Services
A	Agriculture

Industrial
Branches

EP	Electro Energy
CP	Coal Products
PP	Petroleum Products
FM	Ferrous Metallurgy
NF	Nonferrous Metallurgy
CH	Chemicals and Petrochemicals
FP	Forest Products
PA	Paper and Pulp
CM	Construction Materials
MB	Machine-Building and Metal-Working
SG	Soft Goods
PF	Processed Foods
NC	Not-Classified Elsewhere (Residual)

Other

*	Current ruble value (always used)
\$	Current dollar value (always used)
70	1970 Ruble basis (not always used)

NOTE: A variable is exogenous if and only if its name ends in 9 or begins with Q.

Data file management programs developed at WEFA were used to construct maintain and utilize a databank for the model.^{*/} The structure of the list of variables is largely self-explanatory. The set of model variables is a subset of the complete Soviet data-bank.

IV. Technical Progress Feature:

SOVMOD III has been coded so that the analyst may vary the rate of Hicks-neutral technical progress by sector and branch in a convenient way. The period desired for the variation is defined by setting the exogenous variable QLIM equal to 1 for those years. The magnitude of the variation in technical progress is set by changing the following model coefficients:

<u>BRANCH</u>	<u>TECHNICAL PROGRESS VARIATION COEFFICIENT</u>
Aggregate Industry	1000
EP	878
CP	876
PP	877
FM	879
NF	880
CH	882
MB	883
FP	884
PA	887
CM	881
SG	885
PF	886
Construction	1002
Transport/Communications	1003
Domestic Trade	1004
Services	1005
Total Agriculture	1006
Total Crops	1007
Animal Products	1008
Meat	1009
Grain (official)	1010
Grain (Western)	1011

^{*/}We are indebted to Virginia Long for assistance in setting up these programs for our purposes. The present SOVMOD Databank has evolved through several generations of software under the patient guidance of Betsy Donovan.

If, for example, the analyst wishes to augment the rate of Hicks-neutral technical progress in machine-building and metal-working by 2% over the forecast period 1976-1980, he should set QLIM=1 for 1976-1980 by exogenous assumption and set $C(883) = .02$. Such an adjustment may be made in the downward direction as well by setting $C(883) = -.02$.

V. Equations:^{*}

Equations are arranged by sector in the sector-order given above. Behavioral equations are written in the form used for estimation with the sample mean value of the dependent variable shown in parentheses beneath it. In some cases auxiliary variables have been defined below the equation in which they appear. Such auxiliary variables serve only this presentation purpose and do not have model variable numbers.

Figures in parentheses under coefficients are t-statistics; absence thereof implies extraneous estimate. R^2 is the multiple correlation coefficient (unadjusted for degrees of freedom); S.E. is the standard error of estimate and D.W. the Durbin-Watson statistic; D is the normal variate devised by Durbin to test for first order serial correlation in the presence of a lagged dependent variable.

Final questions were estimated by ordinary least squares using T.S.P. (Time Series Processor).[†]

^{*}/ In the estimation of SOVMOD III, valuable research assistance was provided by Raymond Chién and Tayyeb Shabbir.

[†]/ We are indebted to Jean-Pierre LeMaitre, Douglas Bracy and Colin Wordley for assistance in adapting this program to our data files.

SERIES LABEL	VAR#	DESCRIPTION	UNITS	SOURCE	PRECISION
AF070	410	VALUE OF FEED FED TO LIVESTOCK, 1970 PRICES	R, 1970 RUBLES	SATOFH 062475	3
ALV070	101	VALUE OF PRODUCTIVE LIVESTOCK (IND-TR), 1970 PRICE WGT'S	R, 1970R	DER176-THAN	3
ASCHQ	408	AREA SOWN TO GRAIN	M, HECTARES	SAIDERT5	3
AVCP70	102	VALUE OF AGRICULTURAL CURRENT PURCHASES	B, 1970 RUBLES	DER1976	3
BAD*	149	STATE BUDGET EXPENDITURES, ADMINISTRATION	B, CUR	NKH02	3
BADMN	424	INDEX OF ADMINISTRATION & MISC. SERVICES (EST. PRICES)	1970=100	DER75	3
BDAV	152	STATE BUDGET EXPENDITURES, DEFENSE	B, CUR	NKH02	3
BDAV9	153	DEFENSE NONPERSONNEL EXPENDITURES IN CURRENT PRICES	B, CURR.	COHN70	3
BDAV9	153	DEFENSE R&D EXPENDITURES IN CURRENT PRICES	B, CURR.	COHN74	3
BDSK9	428	CHANGE IN STATE RESERVE MILITARY PROCUREMENT ESTIMATE	B, CUR, RUBLES	COHN76	1
BUT*	425	DEFENSE AND STATE RESERVES, CURRENT RUBLES	B, CUR, R	COHN76	3
BUT70	426	DEFENSE AND STATE RESERVES, 1970 RUBLES	B, 1970R	COHN76-THAN	3
BFA*	146	STATE BUDGET EXPENDITURES, FINANCING THE NATIONAL ECONOMY, TOTAL	B, CUR	NKH02	3
BRAUK*	151	STATE BUDGET EXPENDITURES, GOVT. SPENDING, NATL. ACCOUNTS BASIS	B, CUR	NKH02	3
BRES*	148	SCIENCE EXPENDITURES, USSR BUDGET (CURRENT PRICES)	B, RUBL	COHN73	3
BRESDEV	150	STATE BUDGET, EXPENDITURE RESIDUAL	B, RUBL	NKH02	3
BSC*	423	INDEX OF RESEARCH AND DEVELOPMENT (EST. PRICES)	1970=100	DER75	3
BTRN*	147	STATE BUDGET EXPENDITURES, SOCIAL AND CULTURAL MEASURES (INCL. S	R, CUR	NKH02	3
BTRN*	241	TRANSFER PAYMENTS	R, CUR, RUBLES	JIC76	3
CR070	137	CONSUMPTION OF DURABLES, 1970 EST. PRICES	B, 1970 RUBLES	JIC76	3
CRN070	135	CONSUMPTION OF FOOD, 1970 EST. PRICES	B, 1970 RUBLES	JIC76	3
CRN070	136	CONSUMPTION OF SOFT GOODS, 1970 EST. PRICES	B, 1970 RUBLES	JIC76	3
CRN570	224	CONSUMPTION OF NONSERVICES, 1970 EST. PRICES	B, 1970 RUBLES	JIC76-THAN	3
CRN570	138	CONSUMPTION OF SERVICES, 1970 EST. PRICE WEIGHTS	B, 1970 RUBLES	JIC76, DER75, THAN	3
CR70	134	TOTAL CONSUMPTION, 1970 EST. PRICES	B, 1970 RUBLES	JIC76, DER75, THAN	3
ECOCMA	257	EXPORTS TO CMEA OF CATEGORY III AND IV EXCEPT GRAIN	MHB	DER	3
ECUMAS	272	EXPORTS TO CUBA	MSUS	DER	3
ET00M3	262	EXPORTS OF FOOD TO THE DM	MSUS	DER	3
ET00M3	256	GRAIN EXPORTS TO CMEA	MHR	DER	3
ET00M3	261	GRAIN EXPORTS TO THE DM	MSUS	DER	3
ET00M3	267	GRAIN EXPORTS TO LDC	MSUS	DER	3
ET00M3	269	EXPORTS OF MACHINERY TO CHINA	MSUS	DER	3
ET00M3	255	EXPORTS TO CMEA OF CMEA CATEGORY I COMMODITIES	MHB	INDJANA	3
ET00M3	259	BALANCE OF TRADE WITH CMEA	MSUS	DER	3
ET00M3	265	ET00M3-MT0M3	MSUS	DER	3
ET00M3	264	NET GRAIN EXPORT BALANCE AT 63 PRICES	COMB. 63	DER	3
ET00M3	260	EXPORTS TO THE DM OTHER THAN FOOD	MSUS	DER	3
ET00M3	270	NONMACHINERY EXPORTS TO CHINA	MSUS	DER	3
ET00M3	268	EXPORTS TO YUGOSLAVIA AND THE FAR-EASTERN SOCIALIST COUNTRIES	MSUS	DER	3
ET00M3	254	EXPORTS TO CMEA OF CMEA CATEGORY II COMMODITIES	MHB	INDJANA	3
ET00M3	271	TOTAL EXPORTS TO CHINA	MSUS	DER	3
ET00M3	258	TOTAL EXPORTS TO EUROPEAN CMEA (EXCL. YUGOSLAVIA, ALBANIA)	MHR	INDJANA	3
ET00M3	263	TOTAL EXPORTS TO THE DEVELOPED WEST	MSUS	DER	3
ET00M3	266	TOTAL EXPORTS TO LDC	MSUS	DER	3
ET00M3	273	TOTAL EXPORTS TO THE WORLD	MSUS	DER	3
ETW70	274	TOTAL EXPORTS TO THE WORLD IN DOMESTIC CURRENCY	MHR	INDJANA	3
EUSCM4	312	UNSPECIFIED EXPORTS TO CMEA	MSUS	DER	3
EUSM39	304	UNSPECIFIED EXPORTS TO THE WORLD	MSUS	DER	3
FC00M3	350	HARD CURRENCY CREDIT DRAWINGS	MSUS	DER	3
FCR0P5	322	CREDIT REPAYMENTS IN HARD CURRENCY	MSUS	DER	3

DOCUMENTATION

SERIES LABEL	VAR#	DESCRIPTION	UNITS	SOURCE	PRECISION
DEBTS	325	OUTSTANDING DEBT AT THE END OF THE YEAR	MSUS	DEM	3
POBCH	326	HARD CURN. BALANCE OF P. SURPLUS/NETCHS+GSALES+CORAN+9+5LRTM9-IN	MSUS	DEM	3
FGOLD	328	GOLD RESERVES AT THE END OF THE YEAR	TONS	IER	3
FGSALES	327	GOLD SALES	MSUS	UFR	3
FINTS	324	INTEREST PAYMENTS IN HARD CURRENCY	MSUS	DER	3
FLCQ	329	HARD CURRENCY LIQUIDITY (FGOLD+PGOLD9+FDERTS)/MTOMS	NONE	DER	5
FINETHS	321	HARD CURRENCY BALANCE OF PAYMENTS	MSUS	DER	3
FSERVS	320	HARD CURRENCY BALANCE OF SERVICES AND TRANSFERS	MSUS	DER	3
FSATKS	326	ACCUMULATED NET HOLDINGS SINCE 1959	MSUS	DER	3
GEUSUMS	210	END-USE SUM (EXCLUDING CONSUMPTION, NET EXPORTS)	B, 1970H	UFR75-TRAN	3
GNP3	420	SOVIET NET MATERIAL PRODUCT, EST, PRICE 1970 WEIGHTS	B, 1970H	DER75-TRAN	3
GNP45	45	AGRICULTURAL GNP, TOTAL OUTPUT LESS CURRENT PURCHASES	1968-10	JIC	3
GNPCH	306	GNP OF CHINA	1968-10	JIC	3
GNPCH9	94	NON-AGRICULTURAL GNP, EST, PRICE 1970 WEIGHTS	B, 1970H	DER75-TRAN	3
GNPNAS	96	SOVIET GNP, SOVNUD 111.1 (GNPA1+GNPNA1)/.96204	B, 1970H	DER75-TRAN	3
GNP3	191	GNP FPD-USE RESIDUAL = GNP3-GEUSUM3-CR70-.001(ETH70-MTM70)	B, 1970H	DER75-TRAN	3
GNSEH3	244	ZEROES TO USE AS ACTUAL VALUES FOR SIMULATION RESIDUAL	NONE	TRAN	3
GNSEH3	13	CAPITAL INVESTMENT IN AGRICULTURE 72H	NONE	NONE	3
ICAP	155	INDEX OF CAPITAL REPLAINS	B 197	TRAN	3
ICAPCHP	14	CAPITAL INVESTMENT IN CONSTRUCTION	1970=100	DER75	3
ICICRH	22	STATE BUDGET FINANCE, AGRICULTURE	B HUB	NARKHOZ	3
IFAG-9	227	STATE BUDGET FINANCING OF CENTRALIZED INV., ADJUSTED	B CURR	PRAYDA	3
IFAJA	20	INDUSTRY AND CONSTRUCTION	B CUR	TRAN	3
IFIFIN-9	21	TRANSPORTATION AND COMMUNICATION	B CUR	CUR DIG	3
IFIFR-9	21	INVESTMENT IN HOUSING, ADJ TO 1970 PRICES	B CUR	CUR DIG	3
INVS	16	CAPITAL INVESTMENT, (CHEMICALS AND PETROCHEMICALS)	B HUB	NARKHOZ	3
ITICH	9	CAPITAL INVESTMENT, (CONSTRUCTION MATERIALS)	B 1970	NARKHOZ	3
ITICM	6	CAPITAL INVESTMENT, (COAL PRODUCTS)	B 1970	NARKHOZ	3
ITILCP	3	CAPITAL INVESTMENT, (ELECTROENERGY)	B 1970	NARKHOZ	3
ITIEP	2	CAPITAL INVESTMENT, (FERROUS METALS)	B 1970	NARKHOZ	3
ITIFM	5	CAPITAL INVESTMENT, (FERROUS METALS)	B 1970	NARKHOZ	3
ITIFP	8	CAPITAL INVESTMENT, (FUREST PRODUCTS(INCL PAPER))	B 1970	NARKHOZ	3
ITITM	7	CAPITAL INVESTMENT, (MACHINE BUILDING AND METAL WORKING)	B 1970	NARKHOZ	3
ITIN	1	CAPITAL INVESTMENT IN INDUSTRY 72H	B 72H	NARKHOZ	3
ITINF	12	CAPITAL INVESTMENT, NONFERROUS METALLURGY (RESIDUAL CATEGORY)	B, 1970H	NARKHOZ,	3
ITIPF	11	CAPITAL INVESTMENT, (PROCESSED FOOD INDUSTRY)	B 1970	NARKHOZ	3
ITIPP	4	CAPITAL INVESTMENT, (PETROLEUM PRODUCTS)	B 1970	NARKHOZ	3
ITISG	10	CAPITAL INVESTMENT, (LIGHT INDUSTRY)	B 1970	NARKHOZ	3
ITIVA	18	INVESTMENT NONAGRICULTURAL	B RUB	TRAN	3
ITVCH9	235	BRANCH INVESTMENT SHARE/ CHEMICALS & PETROCHEMICALS	NONE	NKH-TRA	3
ITVCH9	238	BRANCH INVESTMENT SHARE/ CONSTRUCTION MATERIALS	NONE	NKH-TRA	3
ITVCP9	231	BRANCH INVESTMENT SHARE/ COAL PRODUCTS	NONE	NKH-TRA	3
ITVCP9	230	BRANCH INVESTMENT SHARE/ ELECTROENERGY	NONE	NKH-TRA	3
ITVCP9	233	BRANCH INVESTMENT SHARE/ FERROUS METALLURGY	NONE	NKH-TRA	3
ITVCP9	237	BRANCH INVESTMENT SHARE/ FOREST PRODUCTS	NONE	NKH-TRA	3
ITVCP9	184	PERCENTAGE NONAGRICULTURAL INVESTMENT, CONSTRUCTION	NONE	TRAN	3
ITVCP9	185	PERCENTAGE NONAGRICULTURAL INVESTMENT, HOUSING	NONE	TRAN	3
ITVCP9	186	PERCENTAGE NONAGRICULTURAL INVESTMENT, INDUSTRY	NONE	TRAN	3
ITVCP9	187	PERCENTAGE NONAGRICULTURAL INVESTMENT, SERVICES	NONE	TRAN	3
ITVCP9	185	PERCENTAGE, NON AGRICULTURAL INVESTMENT, TRANSPORT AND COMMUNIC	NONE	TRAN	3
ITVCP9	236	BRANCH INVESTMENT SHARE/ MACHINE-BUILDING & METAL-WORKING	NONE	NKH-TRA	3

DOCUMENTATION

SERIES LABEL	NAME DESCRIPTION	UNITS	SOURCE	PRECISION
IRPF9	230 BRANCH INVESTMENT SHARE, NON-FERROUS (RESIDUAL SHARE)	NONE	NKH-TRA	3
IRPF9	240 BRANCH INVESTMENT SHARE, PROCESSED FOODS	NONE	NKH-TRA	3
IRPF9	232 BRANCH INVESTMENT SHARE, PETROLEUM PRODUCTS	NONE	NKH-TRA	3
IRSC9	234 BRANCH INVESTMENT SHARE, SOFT GOODS	NONE	NKH-TRA	3
ISR	17 CAPITAL INVESTMENT IN SERVICES 72R	NONE	NARKH02	3
ISUM	419 TOTAL ACCUMULATION FUND, FIXED CAPITAL, INVENT, & LIVESTOCK	U, 1970R	NKH, GH, OEN-TRAN	3
ISTOTA	156 INVENTORY STOCK, END YEAR, NON-TRADE, NON-AGR, 1970 PRICES	B 197	TRAN	3
ISTOT	157 INVENTORY STOCK, END YEAR, DOMESTIC TRADE, 1970 PRICES	B 197	TRAN	3
ITOTAL	14 INVESTMENT, NATIONAL ECONOMY	B 197	TRAN	3
ITOTTA	15 CAPITAL INVESTMENT IN TRANSPORT & COMMUNICATIONS	B 197	TRAN	3
ITOT	158 CHANGE IN INV. STOCK, END YEAR AT 1970 PRICES, NON-TRADE, NON-AGR	B 197	TRAN	3
JP59	159 CHANGE IN INV. STOCK, END YEAR AT 1970 PRICES, DOMESTIC TRADE	B 197	TRAN	3
JTM9	98 SUM OF DEVIATIONS FROM MONTHLY PRECIPITATION VALUES	CM	IMS	3
WAIH	99 WEATHER INDEX, WINTER TEMP INDEX FOR SOUTHERN UKRAINE	NONE	D-G	3
WCOM	35 AGRICULTURAL FIXED CAPITAL (MEAN YEAR 1955 PRICES)	B 1955R	DIAMON	3
KCR	39 BASIC FUNDS, TRADE, SUPPLY, OTHER HP (JAN, 1), 1955 PRICES	B 1955R	NKH	3
KHA	42 ADJUSTED BASIC FUNDS, HOUSING (JAN 1, 1955 PRICES)	B 1955R	TRAN	3
KHIF	38 BASIC FUNDS IN HOUSING (JAN 1, 1955 PRICES)	B 1955R	TRAN	3
KIA	41 ADJUSTED BASIC FUNDS, INDUSTRY JAN 1, 1955 PRICES	B 1955R	NARKH02	3
KICH	339 IMPORTED WESTERN MACHINERY, CHEMICALS (JAN, 1)	B 1955R	TRAN	3
KICH	29 CAPITAL STOCK, CHEMICALS AND PETROCHEMICALS (JAN, 1)	B 1955R	TRAN	3
KICH	32 CAPITAL STOCK, CONSTRUCTION MATERIALS	B 1955R	TRAN	3
KICP	26 CAPITAL STOCK, COAL PRODUCTS	B 1955R	TRAN	3
KIEP	25 CAPITAL STOCK, ELECTRIC POWER	B 1955R	TRAN	3
KIFM	20 CAPITAL STOCK, FERROUS METALS	B 1955R	TRAN	3
KIFP	31 CAPITAL STOCK, FOREST PRODUCTS	B 1955R	TRAN	3
KIM29	179 BASIC FUNDS ADJUSTMENT FOR 19621-M TRANSFER OF HOUSING CAPITAL	B, 1955 RUBLES	DWG76	5
KIM4	340 IMPORTED MACHINERY, METAL-WORKING (JAN, 1)	B, 1955R	COHN 70	3
KIMB	30 CAPITAL STOCK, MACHINE-BUILDING AND METAL-WORKING	B, 1955R	COHN 70	3
KIP	34 CAPITAL STOCK, PROCESSED FOODS	B, 1955R	COHN 70	3
KIPM	331 IMPORTED MACHINERY, PETROLEUM & MINING (JAN, 1)	B, 1955R	COHN 70	3
KIPP	27 CAPITAL STOCK, PETROLEUM PRODUCTS	B, 1955R	COHN 70	3
KISC	33 CAPITAL STOCK, SOFT GOODS	B 195	COHN70	3
KITUT	24 CAPITAL STOCK, TOTAL INDUSTRY	B 195	TRAN	3
KI1589	178 BASIC FUNDS ADJUSTMENT FOR 1958 I-T TRANSFER OF RR CAPITAL (AT	B, 1955 RUBLES	DWG76	5
KI1589	44 IMPORTED WESTERN MACHINERY, INDUSTRY (JAN, 1)	B, 1955R	NKH	3
KI1589	165 NET CHANGE IN BASIC FUNDS, DOMESTIC TRADE	B, 1955R	TRAN	3
KI1589	163 NET CHANGE IN BASIC FUNDS, CONSTRUCTION	B 195	TRAN	3
KI1589	166 NET CHANGE IN BASIC FUNDS, HOUSING	B 195	TRAN	3
KI1589	162 NET CHANGE IN BASIC FUNDS, INDUSTRY	B 195	TRAN	3
KI1589	164 NET CHANGE IN BASIC FUNDS, TRANSPORT & COMMUNICATIONS	B 195	TRAN	3
KI1589	172 NET CHANGE IN BASIC FUNDS, CHEM. & PETROCHEM.	B, 1955R	NKH	3
KI1589	175 NET CHANGE IN BASIC FUNDS, CONSTRUCTION MATERIALS	B, 1955R	NKH	3
KI1589	169 NET CHANGE IN BASIC FUNDS, COAL PRODUCTS	B, 1955R	NKH	3
KI1589	168 NET CHANGE IN BASIC FUNDS, ELECTROENERGY	B, 1955R	NKH	3
KI1589	171 NET CHANGE IN BASIC FUNDS, FERROUS METALLURGY	B, 1955R	NKH	3
KI1589	174 NET CHANGE IN BASIC FUNDS, FOREST PRODUCTS	B, 1955R	NKH	3
KI1589	173 NET CHANGE IN BASIC FUNDS, MACH. & METAL MNGG	B, 1955R	NKH	3
KI1589	177 NET CHANGE IN BASIC FUNDS, PROCESSED FOODS	B, 1955R	NKH	3

SOVIET MODEL DATABASE

D O C U M E N T A T I O N

SERIES LABEL	VAR#	DESCRIPTION	UNITS	SOURCE	PRECISION
KNIPP	170	NET CHANGE IN BASIC FUNDS PETROLEUM PRODUCTS	B, 1955R	NKH	3
KNISG	176	NET CHANGE IN BASIC FUNDS SOFT GOODS	R, 1955R	NKH	3
KNSEH	167	NET CHANGE IN BASIC FUNDS SERVICES	B, 1955R	NKH	3
KSER	40	BASIC FUNDS SERVICES (JAN,1)	B, 1955R	NKH	3
KSUM	154	BASIC FUNDS NATIONAL ECONOMY, JULY 1	R, 1955R	TRAH	3
KTA	43	ADJUSTED BASIC FUNDS, TRANSPORT AND COMMUNICATION (JAN 1, 1955 P	R RUB	TRAH	3
KTCUS	97	RAILROAD CAR UTILIZATION, AVE 24HR DISTANCE PER FREIGHT CAR	KMS/2	SVAZIO	3
KTR	37	BASIC FUNDS, TRANS & COMM JAN 1, 1955 PRICES	B RUB	TRAN	3
KNAL9	104	PERCENT OF KWAT LIVESTOCK BEING FATTENED & YOUNG LIVESTOCK	PERCENT	NARKHOZ	3
MCDCM	276	IMPORTS FROM CHEA OF CHEA CATEGORY IV COMMODITIES	MRB	INDIANA	3
MCDDO	282	IMPORTS OF FOOD AND MANUF, CONS, GOODS, EXCLUDED GRAIN, FROM THE DM	MSUS	GER	3
MCURAS	289	IMPORTS FROM CURA	MSUS	GER	3
MCURAS	277	IMPORTS FROM CHEA OF CHEA CATEGORY III COMMODITIES	MRB	INDIANA	3
MCURAS	284	GRAIN IMPORTS FROM THE DM	MSUS	GER	3
MCURAS	342	IMPORTS, WEST, CHEMICAL EQUIPMENT	M, CUR, S	GER74	3
MCURAS	211	IMPORTS, DEVELOPED WEST, MACHINERY & EQUIPMENT (LESS TRANSPORT EQUIP	MSUS	TAJEC	3
MCURAS	276	IMPORTS FROM CHEA OF CHEA CATEGORY I COMMODITIES	MRB	INDIANA	3
MCURAS	281	MACHINERY IMPORTS FROM THE DM	MSUS	GER	3
MCURAS	280	IMPORTS FROM THE DM OTHER THAN GRAIN	MSUS	GER	3
MCURAS	287	IMPORTS FROM YUGOSLAVIA AND THE FAR EASTERN SOCIALIST COUNTRIES	MSUS	GER	3
MCURAS	285	IMPORTS FROM CHEA OF CHEA CATEGORY II COMMODITIES	MRB	INDIANA	3
MCURAS	283	IMPORTS FROM THE DM, OTHER THAN MACHINERY, CONS, OR UNSPEC,	MSUS	GER	3
MCURAS	288	TOTAL IMPORTS FROM CHINA	MRB	INDIANA	3
MCURAS	279	TOTAL IMPORTS FROM EUR, CHEA EXCL, YUGOSLAVIA, ALBANIA	MSUS	GER	3
MCURAS	285	TOTAL IMPORTS FROM THE DEVELOPED WEST	MSUS	GER	3
MCURAS	286	TOTAL IMPORTS FROM LDC	MSUS	GER	3
MCURAS	343	MRE IMPORTS ALL METALWORKING MRE INCL, COMPLETE PLANTS	M, FT, RUBLES	VNTORG	3
MCURAS	341	MRE IMPORTS MINING, METALLURGICAL AND PETROLEUM	M, FT, RUBLES	VNTORG	3
MCURAS	290	TOTAL IMPORTS FROM THE WORLD	MSUS	GER	3
MCURAS	291	TOTAL IMPORTS FROM THE WORLD IN DOMESTIC CURRENCY	M 1970	INDIANA	3
MCURAS	311	UNSPECIFIED IMPORTS FROM CHEA	MRB	GER	3
MCURAS	313	UNSPECIFIED IMPORTS FROM THE DM	MSUS	GER	3
MCURAS	317	UNSPECIFIED IMPORTS FROM THE WORLD	MSUS	GER	3
MCURAS	402	AGRICULTURAL EMPLOYMENT, KOLKHOZY (COLLECTIVE FARMS)	M, PERSU	FOAD75	3
MCURAS	66	AGRICULTURAL EMPLOYMENT, PRIVATE (MAN-YEAR EQUIVALENTS)	M, PERSU	FOAD75	3
MCURAS	65	AGRICULTURAL EMPLOYMENT, STATE AND COLLECTIVE FARMS	M, PERSU	FOAD75	3
MCURAS	401	AGRICULTURAL EMPLOYMENT, SOVKHOZY (STATE FARMS)	M, PERSU	FOAD75	3
MCURAS	67	AGRICULTURAL EMPLOYMENT, TOTAL	M	UN	3
MCURAS	294	POPULATION IN THE EUROPEAN CHEA	(000)	NKH02	3
MCURAS	74	HIGH LD, ENR, ALL INDUSTRIAL CATEGORIES	(000)	NKH02	3
MCURAS	334	HIGH LD, ENR, METALLURGY	(000)	NKH02	3
MCURAS	333	HIGH LD, ENR, MINING	(000)	NKH02	3
MCURAS	75	HIGH LD, ENR, TRANSPORT	(000)	NKH02	3
MCURAS	72	ENGINEERING-TECHNICAL WORKERS IN INDUSTRY	000 M	NARKHOZ	3
MCURAS	304	POPULATION IN AFRICA, SOUTH AMERICA AND SOUTH ASIA	M	UN	3
MCURAS	60	EMPLOYMENT, CONSTRUCTION	000 PER	RAPAW7	3
MCURAS	404	MILITARY MANPOWER	M, PERSONS	LEF75	1
MCURAS	58	EMPLOYMENT FORESTRY	000 PER	RAPAW7	3
MCURAS	63	EMPLOYMENT, GOVERNMENT AND SERVICES	000 PERS	NHG TRAN	3
MCURAS	45	EMPLOYMENT, INDUSTRIAL	000 PE	RAPAWY	3

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SERIES LABEL	VARIABLE DESCRIPTION	UNITS	SOURCE	PRECISION
NMICH	51 AVERAGE ANNUAL EMPLOYMENT, BRANCHES CHEMICALS & PETROCHEMICALS	000PERS	RAPAMY	3
NMICH	52 AVERAGE ANNUAL EMPLOYMENT, BRANCHES CONSTRUCTION MATERIALS	000PERS	RAPAMY	3
NMICH	53 AVERAGE ANNUAL EMPLOYMENT, BRANCHES CHEMICAL PRODUCTS	000PERS	RAPAMY	3
NMICH	54 AVERAGE ANNUAL EMPLOYMENT, BRANCHES ELECTRICITY	000PERS	RAPAMY	3
NMICH	55 AVERAGE ANNUAL EMPLOYMENT, BRANCHES FERROUS METALLURGY	000PERS	RAPAMY	3
NMICH	56 EMPLOYMENT, FOREST PRODUCTS (EXCEL, PAPER)	THOU, P	RAPAMY	3
NMICH	57 AVERAGE ANNUAL EMPLOYMENT, BRANCHES MACHINE-BUILDING & METALWORK	000PERS	RAPAMY	3
NMICH	58 AVERAGE ANNUAL EMPLOYMENT, BRANCHES CHEMICALS (RESINUAL)	000PERS	RAPAMY	3
NMICH	59 AVERAGE ANNUAL EMPLOYMENT, BRANCHES NON-FERROUS METALLURGY	THOUS, P	RAPAMY	3
NMICH	60 ANNUAL EMPLOYMENT, PULP & PAPER	000PERS	RAPAMY	3
NMICH	61 AVERAGE ANNUAL EMPLOYMENT, BRANCHES PROCESSED FOOD	000PERS	RAPAMY	3
NMICH	62 AVERAGE ANNUAL EMPLOYMENT, BRANCHES PETROLEUM PRODUCTS	000PERS	RAPAMY	3
NMICH	63 AVERAGE ANNUAL EMPLOYMENT, BRANCHES SOFT GOODS (LIGHT INDUSTRY)	000PERS	RAPAMY	3
NMICH	64 EMPLOYMENT, ALL NON-AGRICULTURAL SECTORS	000PERS	RAPAMY	3
NMICH	65 EMPLOYMENT, OTHER	000 PE	RAPAMY	3
NMICH	66 EMPLOYMENT, TRADE ETC.	000 PE	RAPAMY	3
NMICH	67 EMPLOYMENT, TRANSPORTATION AND COMMUNICATIONS	000PERS	RAPAMY	3
NMICH	68 POPULATION, ADULT MALES (16-59/54)	M, PER	NMG TRAN	3
NMICH	69 POPULATION, ADULT FEMALE (16-59/54)	M, PER	73JEC52	3
NMICH	70 POPULATION, TOTAL	M, PER	NKH 72,	3
NMICH	71 POPULATION, TOTAL	M	TRAN	3
NMICH	72 SPECIALISTS, THCO (END YEAR), INTERPOLATION WITH LAGGED ENROLLMENT	000PERS	NKH*00	3
NMICH	73 POPULATION IN WESTERN EUROPE	M	UN	3
NMICH	122 PRICE FOOD SOLD TO CONS. CO-OPS AT RETAIL PIS, 1970M	1970=100	NKH*TRN	3
NMICH	246 WORLD IMPORT PRICES WEIGHTED BY SOVIET EXPORTS	1963=10	HEWETT	3
NMICH	190 UNIT VALUE PRICE OF IRMCH	1963=10	TRAN	3
NMICH	123 CONSUMPTION PRICE, FOOD (FROM PIMF70 & PAFCT8)	1970=1	TRAN	3
NMICH	307 GNP DEFLATOR, CURRENT RUBLE INCOME MEASURE/REAL GNP	1970=1	ESTIMAT	3
NMICH	319 PRICE OF GOLD	1963=10	UN	3
NMICH	249 PRICE INDEX OF WORLD MARKET GRAIN PRICES	1972=1	NARKHOZ	3
NMICH	133 INVESTMENT DEFLATOR, AGRICULTURE	1972=1	NARKHOZ	3
NMICH	129 INVESTMENT DEFLATOR, CONSTRUCTION SECTOR	1972=1	NARKHOZ	3
NMICH	132 INVESTMENT DEFLATOR, HOUSING	1972=1	NARKHOZ	3
NMICH	128 INVESTMENT DEFLATOR, INDUSTRY	1972=1	NARKHOZ	3
NMICH	121 INDEX OF STATE RETAIL PRICES FOR FOOD GOODS (DEFLATED)	1970=1	TRAN	3
NMICH	131 INVESTMENT DEFLATOR, SERVICES	1972=1	NARKHOZ	3
NMICH	130 INVESTMENT DEFLATOR, TRANSPORT AND COMMUNICATIONS	1972=1	NARKHOZ	3
NMICH	126 INDEX OF WHOLESALE INDUSTRIAL PRICES, HEAVY INDUSTRY (DEFLATED)	1970=1	TRAN	3
NMICH	125 INDEX OF WHOLESALE INDUSTRIAL PRICES, LIGHT AND FOOD INDUSTRY (DEFLATED)	1970=1	TRAN	3
NMICH	298 WORLD MARKET PRICES OF MANUFACTURED GOODS	1963=10	UN	3
NMICH	310 UNIT VALUE PRICE OF IRMCH	1963=10	HEWETT	3
NMICH	120 CONSUMPTION PRICE, NON-FOOD (FROM PIMF)	1970=1	TRAN	3
NMICH	124 CONSUMPTION PRICE, TOTAL (FROM PIMF&FCC)	1970=1	TRAN	3
NMICH	212 OFFICIAL EXCHANGE RATE OF THE RUBLE IN DOLLARS	1963=10	NKH	3
NMICH	193 WORLD MARKET PRICES OF PRIMARY PRODUCTS	1963=10	DER	3
NMICH	314 UNIT VALUE PRICES OF SUGAR IMPORTS FROM CUBA	1963=10	UN	3
NMICH	316 WORLD SUGAR PRICES	1970	O.V.TORG	3
NMICH	318 SOVIET TRADE WITH WORLD, IMPORTS, OFFICIAL PRICE INDEX	1963=10	UN	3
NMICH	194 PRICES OF TOTAL WORLD IMPORTS	1963=10	UN	3
NMICH	309 SOVIET TRADE WITH WORLD, EXPORTS, OFFICIAL PRICE INDEX	1970	O.V.TORG	3

SOVIET MODEL DATABASE

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SERIES LABEL	VARIABLE DESCRIPTION	UNITS	SOURCE	PRECISION
PURF	443 MATERIAL INPUTS DEFLATION: AGRICULTURE	1970=1.0	GUILL76	4
PUCG	442 MATERIAL INPUTS DEFLATION: CONSTRUCTION	1970=1.0	GUILL76	4
PUCH	435 MATERIAL INPUTS DEFLATION: CHEMICALS & PETROCHEMICALS	1970=1.0	GUILL76	4
PUCM	438 MATERIAL INPUTS DEFLATION: CONSTRUCTION MATERIALS	1970=1.0	GUILL76	4
PUCP	431 MATERIAL INPUTS DEFLATION: COAL PRODUCTS	1970=1.0	GUILL76	4
PUEP	433 MATERIAL INPUTS DEFLATION: ELECTROENERGY	1970=1.0	GUILL76	4
PUPP	436 MATERIAL INPUTS DEFLATION: FOREST PRODUCTS	1970=1.0	GUILL76	4
PUPH	430 MATERIAL INPUTS DEFLATION: MACHINE BUILDING	1970=1.0	GUILL76	4
PUME	430 MATERIAL INPUTS DEFLATION: METALLURGY	1970=1.0	GUILL76	4
PUNC	441 MATERIAL INPUTS DEFLATION: IND. NEC	1970=1.0	GUILL76	4
PUCB	446 MATERIAL INPUTS DEFLATION: OTHER BRANCHES	1970=1.0	GUILL76	4
PUPA	437 MATERIAL INPUTS DEFLATION: PAPER	1970=1.0	GUILL76	4
PUPF	440 MATERIAL INPUTS DEFLATION: PROCESSED FOODS	1970=1.0	GUILL76	4
PUPP	432 MATERIAL INPUTS DEFLATION: PETROLEUM PRODUCTS	1970=1.0	GUILL76	4
PUSG	439 MATERIAL INPUTS DEFLATION: SOFT GOODS	1970=1.0	GUILL76	4
PUTC	444 MATERIAL INPUTS DEFLATION: TRANSPORT & COMMUNICATION	1970=1.0	GUILL76	4
PUD	445 MATERIAL INPUTS DEFLATION: TRADE & DISTRIBUTION	1970=1.0	GUILL76	4
PACON9	127 PRICE DEFLATOR, CONSTRUCTION ACTIVITY	1972=	1 MARKHU	3
P599	213 IMPORTS, PRICE DEFLATOR, MANUFACTURED GOODS	1972=	DO WESA	3
PTIGE9	422 EXPORT PRICE INDEX, GERMANY, SITC 7,1, NONELEC MACHINERY	1970=1	NBFH	3
QIN	396 DUMMY, =1 IN 1969 AND 1973	NONE	NONE	3
QTP	23 FIVE-YEAR-PLAN CYCLE (1954-57, 62-64, 69-71, 74-76, ETC.)	NONE	DO	3
QLIM	292 DUMMY TIME TREND FOR TECHNOLOGY CHANGE, 1975=1	NONE	DWG	3
QLT28	161 LOG TIME TREND 1928=0	NONE	TRAN	3
QPL5	203 FIVE YEAR PLAN DUMMY (54-57, 63-66, 69-71, 74-76)	NONE	D-G	3
QPH67	253 PRICE REFORM DUMMY FOR 1967-68	NONE	DWG	3
QSH65	201 DUMMY VARIABLE FOR 1954-1964 (PRIVATE AGRICULTURAL EMPLOYMENT)	NONE	C-H	3
QSH67	252 PRICE REFORM DUMMY BEFORE 1967=1, 1967=5, AFTER 1967=0	NONE	NONE	3
QSH68	222 SHIFT VARIABLE FOR 1968 ON =1	NONE	D-G	3
QSH71	421 DUMMY, =1 THRU 1970 =0 AFTER 1970	NONE	NONE	3
QSH72	397 DUMMY, =1 THRU 1971 =0 AFTER 1971	NONE	NONE	3
QTS0	160 TIME VARIABLE WITH 1950=1 AND 1973=24	NONE	NONE	3
QAREF	226 DUMMY VARIABLE FOR 1967-1969 (WAGE REFORM)	NONE	C-H	3
Q590	195 DUMMY, SCALED BY VOLUME OF EMACMB, 64-65=1, 69-70=1, 8, 0 OTHERWISE	NONE	NONE	3
Q5659	249 DUMMY VARIABLE FOR 1958-59	NONE	NONE	3
Q5660	247 DUMMY VARIABLE FOR 1958-60	NONE	NONE	3
Q5661	242 DUMMY VARIABLE FOR 1958-61	NONE	NONE	3
Q59	248 DUMMY VARIABLE FOR 1959	NONE	NONE	3
Q5963	464 DUMMY VARIABLE FOR 1959-1963	NONE	NONE	3
Q6061	465 DUMMY VARIABLE FOR 1960-1961	NONE	NONE	3
Q6064	229 DUMMY VARIABLE FOR 1960-1964	NONE	ONE	3
Q61	216 DUMMY VARIABLE FOR 1961	NONE	NONE	3
Q6162	217 DUMMY VARIABLE FOR 1961-62	NONE	NONE	3
Q6164	199 DUMMY VARIABLE FOR 1961-64	NONE	NONE	3
Q6165	246 DUMMY VARIABLE FOR 1961-65	NONE	NONE	3
Q62	207 DUMMY VARIABLE FOR 1962	NONE	NONE	3
Q6263	200 DUMMY VARIABLE FOR 1962-62	NONE	NONE	3
Q6264	355 DUMMY VARIABLE FOR 1962-64	NONE	NONE	3
Q63	208 DUMMY VARIABLE FOR 1963	NONE	NONE	3
Q6364	196 DUMMY VARIABLE FOR 1963-64	NONE	NONE	3

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SERIES LABEL	VARIABLE DESCRIPTION	UNITS	SOURCE	PRECISION
06308	DUMMY VARIABLE FOR 1963-68	NONE	NONE	3
06405	DUMMY VARIABLE FOR 1964-65	NONE	NONE	3
06406	DUMMY VARIABLE FOR 1964-66	NONE	NONE	3
06407	DUMMY VARIABLE FOR 1964-67	NONE	NONE	3
065	DUMMY VARIABLE FOR 1965	NONE	NONE	3
06500	DUMMY VARIABLE FOR 1965-66	NONE	NONE	3
06501	DUMMY VARIABLE FOR 1965-67	NONE	NONE	3
066	DUMMY VARIABLE FOR 1966	NONE	NONE	3
06608	DUMMY VARIABLE FOR 1966-1968	NONE	NONE	3
06609	DUMMY VARIABLE FOR 1966-1969	NONE	NONE	3
06672	DUMMY VARIABLE FOR 1966-1972	NONE	NONE	3
067	DUMMY VARIABLE FOR 1967	NONE	NONE	3
06708	DUMMY VARIABLE FOR 1967-68	NONE	NONE	3
068	DUMMY VARIABLE FOR 1968, INDUSTRY WAGE	TRAN	TRAN	3
06809	DUMMY VARIABLE FOR 1968-69	NONE	NONE	3
06870	DUMMY VARIABLE FOR 1968-70	NONE	NONE	3
069	DUMMY VARIABLE FOR 1969	NONE	NONE	3
06908	DUMMY VARIABLE FOR 1969 UN	NONE	NONE	3
070	DUMMY VARIABLE FOR 1970	NONE	NONE	3
07175	DUMMY VARIABLE FOR 1971-1975	NONE	NONE	3
073	DUMMY FOR 1973	NONE	NONE	3
074	DUMMY VARIABLE FOR 1974	NONE	NONE	3
RGXAF9	RATIO GVO/X 1 AGRICULTURE/FORESTRY	GDG	GDG	3
RGXCC9	RATIO GVO/X 1 CONSTRUCTION	GDG	GDG	3
RGXCH9	RATIO GVO/X 1 CHEMICALS & PETROCHEMICALS	GDG	GDG	3
RGXCH9	RATIO GVO/X 1 CONSTRUCTION MATERIALS	GDG	GDG	3
RGXCP9	RATIO GVO/X 1 COAL PRODUCTS	GDG	GDG	3
RGXCP9	RATIO GVO/X 1 ELECTROENERGY	GDG	GDG	3
RGXEP9	RATIO GVO/X 1 FOREST PRODUCTS (INCL. PAPER)	GDG	GDG	3
RGXEP9	RATIO GVO/X 1 MACHINE BUILDING	GDG	GDG	3
RGXME9	RATIO GVO/X 1 METALLURGY	GDG	GDG	3
RGXNC9	RATIO GVO/X 1 IND. NEC	GDG	GDG	3
RGXNH9	RATIO GVO/X 1 OTHER BRANCHES	GDG	GDG	3
RGXPA9	RATIO GVO/X 1 PAPER AND PAPERBOARD	GDG	GDG	3
RGXPF9	RATIO GVO/X 1 PROCESSED FOODS	GDG	GDG	3
RGXPH9	RATIO GVO/X 1 PETROLEUM PRODUCTS	GDG	GDG	3
RGXSC9	RATIO GVO/X 1 SOFT GOODS	GDG	GDG	3
RGXTC9	RATIO GVO/X 1 TRANSPORT/COMMUNICATIONS	GDG	GDG	3
RGXTD9	RATIO GVO/X 1 DOMESTIC TRADE	GDG	GDG	3
RTOP9	TAX RATE PROFITS	NONE	GDG	3
245	DEVIATIONS FROM MEAN OF TURNOVER TAX RATE (SMOOTHED)	NONE	GDG	3
218	TAX RATE, ADJUSTMENT, OTHER SOCIAL SECTOR	NONE	GDG	3
220	RATIO VALUE ADDED (CUR. PRICES) /GNP	X	TRAN	3
228	INDEX OF AGRICULTURAL INPUTS, SOVN AREA	NONE	NONE	3
100	REVENUES, DEDUCTIONS FROM PROFIT, STATE ENTERPRISES	1965#	GDG	3
139	TRADE UNION AND PARTY DUES	U. CUR, RUBLES	GDG	3
406	INSURANCE PREMIUMS	B. CUR, RUBLES	GDG	3
407	REVENUES, OTHER SOCIAL SECTORS	B. CUR, RUBLES	GDG	3
141	TOTAL STATE DEDUCTIONS (1973 FIGURES)	B. RUBL	GDG	3
144	ADJUSTMENT FOR LOCAL TAXES, ADMISSION FEES, AND LOTTERIES	B. RUBL	GDG	3
251		B. RUBL	GDG	3

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SERIES LABEL	NAME DESCRIPTION	UNITS	SOURCE	PRECISION
TR0P*	143 REVENUES, POPULATION (INCOME TAXES, STATE BONDS, LOTTERIES ETC)	B RUBL	NKHOZ	3
TR*	145 STATE BUDGET, TOTAL REVENUES (CURRENT RUBLES)	B RUBL	NKHOZ	3
TS0*	142 REVENUES, SOCIAL INSURANCE DEDUCTIONS	B RUBL	NKHOZ	3
TT*	140 REVENUES, TURNOVER TAX	B RUBL	NKHOZ	3
UAF	391 MATERIAL INPUTS AGRICULTURE	B, 1973 RUBLES	GUILL76	3
UCG	390 MATERIAL INPUTS CONSTRUCTION	B, 1970 RUBLES	GUILL76	3
UCH	383 MATERIAL INPUTS CHEMICALS & PETROCHEMICALS	B, 1970 RUBLES	GUILL76	3
UCM	386 MATERIAL INPUTS CONSTRUCTION MATERIALS	B, 1970 RUBLES	GUILL76	3
UCP	379 MATERIAL INPUTS COAL PRODUCTS	B, 1970 RUBLES	GUILL76	3
UPP	381 MATERIAL INPUTS ELECTROENERGY	B, 1970 RUBLES	GUILL76	3
UPF	384 MATERIAL INPUTS FOREST PRODUCTS	B, 1970 RUBLES	GUILL76	3
UPB	382 MATERIAL INPUTS MACHINE-BLOG. & METAL-MKAG.	B, 1970 RUBLES	GUILL76	3
UNE	378 MATERIAL INPUTS METALLURGY	B, 1970 RUBLES	GUILL76	3
UNC	389 MATERIAL INPUTS IND. NEC.	B, 1970 RUBLES	GUILL76	3
UUB	394 MATERIAL INPUTS OTHER BRANCHES	B, 1970 RUBLES	GUILL76	3
UPA	385 MATERIAL INPUTS PAPER	B, 1970 RUBLES	GUILL76	3
UPF	388 MATERIAL INPUTS PROCESSED FOODS	B, 1970 RUBLES	GUILL76	3
USG	380 MATERIAL INPUTS PETROLEUM PRODUCTS	B, 1970 RUBLES	GUILL76	3
UTC	387 MATERIAL INPUTS SOFT GOODS	B, 1970 RUBLES	GUILL76	3
UTG	392 MATERIAL INPUTS TRANSPORT & COMMUNICATION	B, 1970 RUBLES	GUILL76	3
UTO	393 MATERIAL INPUTS TRADE & DISTRIBUTION	B, 1970 RUBLES	GUILL76	3
NAGA	460 AVERAGE WAGE-STATE AGRICULTURE	RUBLES	NARKHOZ	3
NAGCH	452 AVERAGE WAGE-CHEMICALS	RUBLES	VSTEMP, WAGE FUND 3	3
NAGCM	455 AVERAGE WAGE-CONSTR. MATERIALS	RUBLES	VSTEMP, WAGE FUND 3	3
NAGCON	459 AVERAGE WAGE-CONSTRUCTION	RUBLES	NARKHOZ	3
NAGCP	468 AVERAGE WAGE-COAL PRODUCTS	RUBLES	VSTEMP, WAGE FUND 3	3
NAGEP	463 AVERAGE WAGE-ELECTRIC POWER	RUBLES	VSTEMP, WAGE FUND 3	3
NAGE	450 AVERAGE WAGE-ECONOMY	RUBLES	NARKHOZ	3
NAGFM	467 AVERAGE WAGE-FERROUS METALLURGY	RUBLES	VSTEMP, WAGE FUND 3	3
NAGFP	453 AVERAGE WAGE-FOREST PRODUCTS	RUBLES	VSTEMP, WAGE FUND 3	3
NAGI	458 AVERAGE WAGE-INDUSTRY	RUBLES	NARKHOZ	3
NAGMB	451 AVERAGE WAGE-MBMM	RUBLES	VSTEMP, WAGE FUND 3	3
NAGPF	457 AVERAGE WAGE-PROCESSED FOOD	RUBLES	VSTEMP, WAGE FUND 3	3
NAGPG	449 AVERAGE WAGE-PETROLEUM & GAS	RUBLES	NARKHOZ	3
NAGP	454 AVERAGE WAGE-PAPER	RUBLES	VSTEMP, WAGE FUND 3	3
NAGSC	456 AVERAGE WAGE-SOFT GOODS	RUBLES	VSTEMP, WAGE FUND 3	3
NAGTC	461 AVERAGE WAGE-TRANS & COMM	RUBLES	VSTEMP, WAGE FUND 3	3
NAGTD	462 AVERAGE WAGE-TRADE & DIST	RUBLES	VSTEMP, WAGE FUND 3	3
NAX*	403 AVERAGE WAGE, COLLECTIVE FARMS	RUBLES	I-O DATA INT	3
NAS*	106 AVERAGE WAGE, STATE FARMS	RUBLES	VSTEMP, WAGE FUND 3	3
NCS	107 WAGES, CONSTRUCTION	RUBLES	NARKHOZ	3
NDF*	405 AVERAGE WAGE, MILITARY MANPOWER	RUBLES	NARKHOZ	3
NDS*	110 ANNUAL WAGE RATE, GOVERNMENT & SERVICES	CUR, RUBLES	JEC76-THAN	1
NI*	105 WAGES, INDUSTRY	RUBL	NKHOZ	3
NS*	109 WAGES, DOMESTIC TRADE AND DISTRIBUTION	RUBLES	TOJECR2	3
NIC*	108 ANNUAL WAGE RATE, TRANSPORT & COMMUNICATIONS	RUBLES	TOJECR2	3
WIDM9	297 TOTAL IMPORTS OF THE DEV. WEST	CUR, R.	NKH	3
WIDC9	302 TOTAL IMPORTS OF THE LDC-S	1963=10	UN M, B	3
W19	305 TOTAL IMPORTS OF THE WORLD	1963=10	UN M, HU	3
XACN	412 NORMAL CROP OUTPUT	B, 1970 RUBLES	OR76-INTERP	3

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SERIES LABEL	VAM DESCRIPTION	UNITS	SOURCE	PRECISION
XACTO49	103 VALUE OF FEED FED TO LIVESTOCK	M1968	SRI	3
XAGIN	89 NORMAL AGRICULTURAL OUTPUT	B,1970 RUBLES	DER76-INTERP	3
XAGT70	88 TOTAL NET FARM OUTPUT, 1970 PRICES	B,1970 RUBLES	SAIOER 062475	3
XAM	918 NORMAL OUTPUT, MEAT PRODUCTION		DER76-TRAN	3
XAN	415 NORMAL OUTPUT, ANIMAL PRODUCTS TOTAL		DER76-TRAN	3
XANIM70	414 GROSS LIVESTOCK PRODUCTION, 1970 PRICES	B,1970 RUBLES	SAIOER 062475	3
XCRP70	411 VALUE OF TOTAL CROPS, 1970 PRICES	B RUB	SAIOER 062475	3
XCHUR	90 CONSTRUCTION ACTIVITY		NARKHOZ	3
XDTR	92 INDEX OF TRADE ACTIVITY	1970=100	DER75	3
XGOLD4	198 GOLD PRODUCTION	TONS	DER	3
XGR	337 GRAIN PRODUCTION	M TONS	DIAMOND	3
XGRCM9	293 GRAIN PRODUCTION IN THE EUROPEAN CMEA	M TONS	FAO	3
XGRLDC9	303 GRAIN PRODUCTION IN THE LDC-9	M TONS	FAO	3
XGRPK	295 SECOND PEAK GRAIN OUTPUT	M TONS	DIAMOND	3
XGRIN	416 NORMAL GRAIN OUTPUT	M TONS	DER76-INTERP	3
XGRI	913 SOVIET GRAIN PRODUCTION, GROSS GRAIN AGGREGATE	M TONS	SAIOER75	3
XGRHE9	300 GRAIN PRODUCTION IN WESTERN EUROPE	M TONS	FAO	3
XGVUAF	357 INDEX OF AGRICULTURE/FORESTRY GVO IN CURRENT PRICES	1966=100	GOG	3
XGVUAF	356 INDEX OF CONSTRUCTION GVO IN CURRENT PRICES	1966=100	GOG	3
XGVUCG	349 INDEX OF CHEMICALS AND PETROCHEMICALS GVO IN CURRENT PRICES	1966=100	GOG	3
XGVUCH	352 INDEX OF CONSTRUCTION MATERIALS GVO IN CURRENT PRICES	1966=100	GOG	3
XGVUCM	345 INDEX OF COAL PRODUCTS GVO IN CURRENT PRICES	1966=100	GOG	3
XGVUCP	347 INDEX OF ELECTROENERGY GVO IN CURRENT PRICES	1966=100	GOG	3
XGVUEP	350 INDEX OF FOREST PRODUCTS GVO IN CURRENT PRICES	1966=100	GOG	3
XGVUFP	348 INDEX OF MACHINE BUILDING GVO IN CURRENT PRICES	1966=100	GOG	3
XGVUHH	344 INDEX OF METALLURGY GVO IN CURRENT PRICES	1966=100	GOG	3
XGVUHE	355 INDEX OF IND NEC GVO IN CURRENT PRICES	1966=100	GOG	3
XGVUHC	360 INDEX OF OTHER BRANCHES GVO IN CURRENT PRICES	1966=100	GOG	3
XGVUHB	351 INDEX OF PAPER GVO IN CURRENT PRICES	1966=100	GOG	3
XGVUPA	346 INDEX OF PROCESSED FOODS GVO IN CURRENT PRICES	1966=100	GOG	3
XGVUPF	353 INDEX OF PETROLEUM PRODUCTS GVO IN CURRENT PRICES	1966=100	GOG	3
XGVUPP	353 INDEX OF SOFT GOODS GVO IN CURRENT PRICES	1966=100	GOG	3
XGVUSG	358 INDEX OF TRANSPORT/COMMUNICATIONS GVO IN CURRENT PRICES	1966=100	GOG	3
XGVUTC	359 INDEX OF DOMESTIC TRADE GVO IN CURRENT PRICES	1966=100	GOG	3
XGVUTD	82 CHEMICALS	1970=10	DER74	3
XICH	85 CONSTRUCTION MATERIALS	1970=10	DER74	3
XICM	78 COAL PRODUCTS	1970=10	DER74	3
XICP	77 ELECTRIC POWER	1970=10	DER74	3
XIFP	80 FERROUS METALS	1970=10	DER74	3
XIFM	84 FOREST PRODUCTS	1970=10	DER74	3
XIFP	83 MACHINERY	1970=1	DER74	3
XINB	81 NONFERROUS METALS	1970=10	DER74	3
XINF	18A PAPER AND PAPERBOARD	1970=10	DER74	3
XIPA	87 PROCESSED FOODS	1970=10	DER74	3
XIPF	79 PETROLEUM PRODUCTS & GAS	1970=10	DER74	3
XIPP	86 SOFT GOODS	1970=10	DER74	3
XISG	76 TOTAL INDUSTRIAL PRODUCTION	1970=10	DER74	3
XIT	417 VALUE OF MEAT PRODUCED, 1970 PRICES	B,1970 RUBLES	SAIOER 062475	3
XMEAT70	93 INDEX OF SERVICES, 1970 WEIGHTS	1970=100	DER74	3
XSEH70	315 SUGAR PRODUCTION OF CUBA	100000T	FAO	3
XSUG9				

DOCUMENTATION

SERIES LABEL	VAR# DESCRIPTION	UNITS	SOURCE	PRECISION
X17H	91 TRANS-COMM INDEX, 1970 WEIGHTS, RUBLE SERIES FOR COMM	1970=100	O-G	3
YCMEA9	192 NET MATERIAL PRODUCT IN CONSTANT PRICES, CHEA	1963=10	UNCTAD	3
Z01*	117 TOTAL AMORTIZATION FUNDS, NATIONAL ECONOMY	B, CUR, H	NKH	0
Z070	116 REAL DISPOSABLE HOUSEHOLD INCOME	B, 1970, RUBLES	TRAN	3
ZEPG*9	119 PLANNED GROSS PROFITS, NATIONAL ECONOMY	B, RUB	RAYDA	0
ZG*	111 GROSS EARNINGS, WAGE AND SALARY WORKERS	B, CUR, RUBLES	JEC76	3
Z1K60	115 AGRICULTURAL INCOME IN KIND	B, 1960, RUBLES	TRAN	3
Z1K60	181 MILITARY PAY AND ALLOWANCES	B, CUR, RUBLES	JEC76	3
Z1K60	182 PROFITS DISTRIBUTED TO COOPERATIVE MEMBERS	B, CUR, RUBLES	JEC76	3
Z1K60	110 ACTUAL GROSS PROFITS, NATIONAL ECONOMY	B, RUB	NKH02	0
Z1K60	427 RESIDUAL INCOME * SOVNUD II	B, CUR, H	TRAN	0
Z1K60	113 NET HOUSEHOLD INCOME FROM AGRICULTURAL SALES	B, CUR, RUBLES	JEC76	3
Z1K60	110 DISPOSABLE HOUSEHOLD MONEY INCOME	B, CUR, RUBLES	JEC76-TRAN	3
Z1K60	110 GROSS HOUSEHOLD MONEY INCOME	B, CUR, RUBLES	JEC76-TRAN	3
Z1K60	112 WAGE PAYMENTS TO COLLECTIVE FARM MEMBERS	B, CUR, RUBLES	JEC76	3

N. POPULATION AND EMPLOYMENT(N.1) NPOPU Urban Population

$$\frac{100 \cdot \text{NPOPU}}{\text{NPOP9}} = -91.8791 + 38.8772 \text{ QLT28} \\ (13.73) \quad (23.50) \\ (54.91)$$

$$+ 2.44336 \left(\frac{\text{IHS}}{\text{IHS}_{-1}} - 1. \right)_{-2} \\ (2.59)$$

$$+ 2.08339 \{ \text{WI}^* / (\text{WAK}^* + 1000. \text{ZSAG}^* / \text{NAKOL}) \}_{-2} \\ (5.82)$$

$$- 3.67684 \left\{ \left(\frac{\text{XAGT70}_{-1}}{\text{XAGTN}_{-1}} + \frac{\text{XAGT70}_{-2}}{\text{XAGTN}_{-2}} - 2. \right) / 2. \right\} \\ (2.39)$$

$$\bar{R}^2 = 0.998$$

$$\text{S.E.} = 0.17$$

$$\text{D.W.} = 1.85$$

Sample Period 1960-1974

(N.2) NPOPR Rural Population

$$\text{NPOPR} \equiv \text{NPOP9} - \text{NPOPU}$$

(N.3) NMNA Nonagricultural Employment

$$\frac{.1 * \text{NMNA}}{(\text{NPOPU}_{-1} + \text{NPOP9})/2} = 23.11108 \text{ QLT28} (1. - \text{Q69ON}) \\ (12.27) \\ (56.32)$$

$$+ 87.085 \text{ Q69ON} + 18.17 \left(\frac{\text{NPOPAB9} + \text{NPOPAB9}_{-1}}{\text{NPOP9} + \text{NPOP9}_{-1}} \right) \\ (13.01) \quad (1.31)$$

$$+ 8.79513 \left(\frac{\text{WI}^* / \text{PRC}}{\text{WI}^*_{-1} / \text{PRC}_{-1}} \right) \\ (1.41)$$

(N.3) NMNA Nonagricultural Employment, Continued

$$- 45.94724 \frac{(\text{NPOPU} + \text{NPOPU}_{-1}) + (\text{NPOPU}_{-1} + \text{NPOPU}_{-2})}{(5.00) \{ (\text{NPOPU}_{-1} + \text{NPOPU}_{-2}) + (\text{NPOPU}_{-2} + \text{NPOPU}_{-3}) \}}$$

$$R^2 = 0.994$$

$$\text{S.E.} = 0.24$$

$$\text{D.W.} = 1.46$$

Sample Period 1959-1974

(N.4) NMI Industrial Employment

$$\frac{100.\text{NMI}}{(\text{NMNA})} = 0.87296 \left(\frac{100.\text{NMI}}{\text{NMNA}} \right)_{-1} - 0.04442 \left(\frac{100.\text{NMC}}{\text{NMNA}} \right)_{-1} \\ (39.994) \quad (20.57) \quad (0.43)$$

$$+ 0.37857 \left(\frac{100.\text{NMTC}}{\text{NMNA}} \right)_{-1} \\ (2.71)$$

$$- 1.98480 \left(\frac{100.\text{NMS}}{\text{NMNA}} \right)_{-1} + 0.70431 \left(\frac{100.\text{NMG}}{\text{NMNA}} \right)_{-1} \\ (3.81) \quad (4.15)$$

$$- 1.78871 \left(\frac{\text{INA}}{\text{INA}_{-1}} - 1. \right) \\ (2.47)$$

$$R^2 = 0.997$$

$$\text{S.E.} = 0.097$$

$$\text{D.W.} = 2.08$$

Sample Period 1957-1974

$$\text{D.} = 0.17$$

(N.5) NMC Construction Employment

$$\frac{100.\text{NMC}}{\text{NMNA}} = 0.09038 \left(\frac{100.\text{NMI}}{\text{NMNA}} \right)_{-1} + 0.73745 \left(\frac{100.\text{NMC}}{\text{NMNA}} \right)_{-1} \\ (11.028) \quad (1.50) \quad (5.03)$$

$$- 0.19102 \left(\frac{100.\text{NMTC}}{\text{NMNA}} \right)_{-1} + 1.63650 \left(\frac{100.\text{NMS}}{\text{NMNA}} \right)_{-1} \\ (0.96) \quad (2.21)$$

$$- 0.50138 \left(\frac{100.\text{NMG}}{\text{NMNA}} \right)_{-1} + 3.21806 \left(\frac{\text{INA}}{\text{INA}_{-1}} - 1. \right) \\ (2.08) \quad (3.12)$$

(N.5) NMC Construction Employment (Continued)

$R^2 = 0.909$

S.E. = 0.138

D.W. = 2.21

Sample Period 1957-1974

D. = 0.57

(N.6) NMTC Transport and Communications Employment

$$\frac{100.NMTC}{NMNA} = 0.02306 \left(\frac{100.NMI}{NMNA} \right)_{-1} + 0.03637 \left(\frac{100.NMC}{NMNA} \right)_{-1}$$

(12.045) (0.88) (0.57)

$$+ 0.90413 \left(\frac{100.NMTC}{NMNA} \right)_{-1} + 1.01435 \left(\frac{100.NMS}{NMNA} \right)_{-1}$$

(10.50) (3.15)

$$- 0.35525 \left(\frac{100.NMG}{NMNA} \right)_{-1} + 1.03789 \left(\frac{INA}{INA} \right)_{-1} (-1.)$$

(3.39) (2.32)

$R^2 = 0.989$

S.E. = 0.060

D.W. = 2.01

Sample Period 1957-1974

D. = 0.02

(N.7) NMS Domestic Trade Employment

$$\frac{100.NMS}{NMNA} = 0.03509 \left(\frac{100.NMI}{NMNA} \right)_{-1} + 0.07217 \left(\frac{100.NMC}{NMNA} \right)_{-1}$$

(8.937) (1.98) (1.67)

$$- 0.13088 \left(\frac{100.NMTC}{NMNA} \right)_{-1} + 0.74102 \left(\frac{100.NMS}{NMNA} \right)_{-1}$$

(2.24) (3.40)

$$+ 0.06892 \left(\frac{100.NMG}{NMNA} \right)_{-1} - 0.69642 \left(\frac{INA}{INA} \right)_{-1} (-1.)$$

(0.97) (2.30)

$R^2 = 0.993$

S.E. = 0.041

D.W. = 1.61

Sample Period 1957-1974

D. = 2.19

(N.8) NMG Services Employment

$$\begin{aligned}
 \frac{100.NMG}{NMNA} &= 0.00386 \left(\frac{100.NMI}{NMNA} \right)_{-1} + 0.12899 \left(\frac{100.NMC}{NMNA} \right)_{-1} \\
 &\quad (0.14) \qquad \qquad \qquad (1.86) \\
 &\quad (26.370) \\
 &\quad - 0.01908 \left(\frac{100.NMTC}{NMNA} \right)_{-1} - 0.22907 \left(\frac{100.NMS}{NMNA} \right)_{-1} \\
 &\quad \quad (0.20) \qquad \qquad \qquad (0.65) \\
 &\quad + 1.04081 \left(\frac{100.NMG}{NMNA} \right)_{-1} - 2.44017 \left(\frac{INA}{INA}_{-1} \right)_{-1} \\
 &\quad \quad (9.10) \qquad \qquad \qquad (5.00)
 \end{aligned}$$

$$\begin{aligned}
 R^2 &= 0.998 & S.E. &= 0.066 & D.W. &= 2.74 \\
 \text{Sample Period } 1957-1974 & & & & D. &= 1.80
 \end{aligned}$$

(N.9) NMF Forestry Employment

$$\begin{aligned}
 \frac{100.NMF}{NMNA} &= 0.00904 \left(\frac{100.NMI}{NMNA} \right)_{-1} - 0.06383 \left(\frac{100.NMC}{NMNA} \right)_{-1} \\
 &\quad (0.95) \qquad \qquad \qquad (2.78) \\
 &\quad (0.600) \\
 &\quad + 0.09507 \left(\frac{100.NMTC}{NMNA} \right)_{-1} + 0.22944 \left(\frac{100.NMS}{NMNA} \right)_{-1} \\
 &\quad \quad (3.06) \qquad \qquad \qquad (1.97) \\
 &\quad - 0.08646 \left(\frac{100.NMG}{NMNA} \right)_{-1} + 0.16292 \left(\frac{INA}{INA}_{-1} \right)_{-1} \\
 &\quad \quad (2.28) \qquad \qquad \qquad (1.01)
 \end{aligned}$$

$$\begin{aligned}
 R^2 &= 0.949 & S.E. &= 0.022 & D.W. &= 1.17 \\
 \text{Sample Period } 1957-1974 & & & & &
 \end{aligned}$$

(N.10) NMO Other Branch Employment

$$\begin{aligned}
 \frac{100.NMO}{NMNA} = & - 0.02437 \left(\frac{100.NMI}{NMNA} \right)_{-1} + 0.24879 \left(\frac{100.NMC}{NMNA} \right)_{-1} \\
 & (0.53) \qquad \qquad \qquad (2.26) \\
 & (1.027) \\
 & - 0.23239 \left(\frac{100.NMTC}{NMNA} \right)_{-1} - 1.49635 \left(\frac{100.NMS}{NMNA} \right)_{-1} \\
 & (1.56) \qquad \qquad \qquad (2.70) \\
 & + 0.58977 \left(\frac{100.NMG}{NMNA} \right)_{-1} - 1.00696 \left(\frac{INA}{INA} \right)_{-1} \\
 & (3.25) \qquad \qquad \qquad (1.30)
 \end{aligned}$$

$$R^2 = 0.906 \qquad \qquad \qquad S.E. = 0.104 \qquad \qquad \qquad D.W. = 1.19$$

Sample Period 1957-1974

(N.11) NASOV Annual Employment, State Farms

$$\begin{aligned}
 \frac{200.NASOV}{NPOPR+NPOPR}_{-1} = & - 30.91035 + 10.59870 \text{ QLT28} \\
 & (17.01) \qquad (21.38) \\
 & (7.880) \\
 & - 3.01564 \left(\frac{XAGT70_{-1}}{XAGTN_{-1}} \right) + \frac{XAGT70_{-2}}{XAGTN_{-2}} - 2.) / 2. \\
 & (2.21)
 \end{aligned}$$

$$R^2 = 0.970 \qquad \qquad \qquad S.E. = 0.256 \qquad \qquad \qquad D.W. = 1.70$$

Sample Period = 1958-1974

(N.12) NAKOL Annual Employment, Collective Farms

$$\begin{aligned}
 \frac{200.NAKOL}{NPOPR+NPOPR}_{-1} = & 15.23652 - 19.17145 \text{ QSH72}_{-1} \text{ (QLT28-3.807)} \\
 & (65.62) \qquad (11.74) \\
 & (17.825) \\
 & - 0.55980 \text{ QSH65} + 4.29917 \left(\frac{XAGT70}{XAGTN} \right)_{-1} \\
 & (1.15) \qquad \qquad \qquad (1.47) \\
 & + 8.61402 \left(\frac{XAGT70_{-1}}{XAGTN_{-1}} \right) + \frac{XAGT70_{-2}}{XAGTN_{-2}} - 2.) / 2. \\
 & (2.74)
 \end{aligned}$$

(N.12) NAKOL Annual Employment, Collective Farms (Continued)

$$R^2 = 0.948 \quad S.E. = 0.585 \quad D.W. = 1.10$$

Sample Period 1958-1974

(N.13) NAPRV Annual Employment, Private Agriculture

$$\frac{200.NAPRV}{NPOPR+NPOPR_{-1}} = 10.71520 - 2.18579 QSH72_{-1} (QLT28-3.807)$$

(161.35) (4.67)

(10.684)

$$- 0.98828 QSH65 + 1.55859 \left(\frac{XAGT70}{XAGTN} - 1. \right)$$

(7.08) (1.86)

$$R^2 = 0.887 \quad S.E. = 0.168 \quad D.W. = 1.63$$

Sample Period 1958-1974

(N.14) NASK Annual Employment, State and Collective Farms

$$NASK \equiv NASOV + NAKOL$$

(N.15) NAT Total Agricultural Employment

$$NAT \equiv NASK + NAPRV$$

(N.16) NMIEP Employment, Electroenergy

$$\frac{100.NMIEP}{NMI} = - 10.09184 + 0.04427 \left(\frac{100.NMIMB}{NMI} - 1 \right)$$

(2.83) (1.14)

(1.896)

$$+ 1.08600 \left(\frac{100.NMIFM}{NMI} - 1 \right) + 0.02812 \left(\frac{100.NMICM}{NMI} - 1 \right)$$

(5.18) (0.53)

$$+ 0.58897 \left(\frac{100.NMIPP}{NMI} - 1 \right) - 0.10171 \left(\frac{INA}{INA} - 1. \right)$$

(1.15) (0.29)

$$+ 1.35418 QLT28$$

(1.23)

(N.16) NMIEP Employment, Electroenergy (Continued)

$$R^2 = 0.974 \quad S.E. = 0.034 \quad D.W. = 2.02$$

Sample Period 1957-1974

(N.17) NMICP Employment, Coal Products

$$\begin{aligned} \frac{100.NMICP}{NMI} &= 24.65546 + 0.06046 \left(\frac{100.NMIMB}{NMI} \right)_{-1} \\ &\quad (3.73) \quad (0.84) \\ (4.342) \\ &\quad + 0.06757 \left(\frac{100.NMIFM}{NMI} \right)_{-1} + 0.024710 \left(\frac{100.NMICM}{NMI} \right)_{-1} \\ &\quad (0.17) \quad (0.25) \\ &\quad + 3.19908 \left(\frac{100.NMIPP}{NMI} \right)_{-1} + 1.82804 \left(\frac{INA}{INA} \right)_{-1} (-1.) \\ &\quad (3.37) \quad (2.83) \\ &\quad - 7.06813 QLT28 \\ &\quad (3.46) \end{aligned}$$

$$R^2 = 0.997 \quad S.E. = 0.063 \quad D.W. = 2.31$$

Sample Period 1957-1974

(N.18) NMIPP Employment, Petroleum Products

$$\begin{aligned} \frac{100.NMIPP}{NMI} &= 1.48911 + 0.01470 \left(\frac{100.NMIMB}{NMI} \right)_{-1} \\ &\quad (1.39) \quad (1.26) \\ (0.841) \\ &\quad + 0.01194 \left(\frac{100.NMIFM}{NMI} \right)_{-1} - 0.00157 \left(\frac{100.NMICM}{NMI} \right)_{-1} \\ &\quad (0.19) \quad (0.10) \\ &\quad + 0.24956 \left(\frac{100.NMIPP}{NMI} \right)_{-1} + 0.29014 \left(\frac{INA}{INA} \right)_{-1} (-1.) \\ &\quad (1.62) \quad (2.77) \\ &\quad - 0.39523 QLT28 \\ &\quad (1.19) \end{aligned}$$

$$R^2 = 0.926 \quad S.E. = 0.010 \quad D.W. = 2.94$$

Sample Period 1957-1974 D. = 2.64

(N.19) NMIFM Employment, Ferrous Metallurgy

$$\begin{aligned}
\frac{100.NMIFM}{NMI} &= 2.27949 + 0.01082 \left(\frac{100.NMIMB}{NMI} \right)_{-1} \\
&\quad (0.81) \quad (0.35) \\
(4.426) &+ 0.84345 \left(\frac{100.NMIFM}{NMI} \right)_{-1} + 0.05374 \left(\frac{100.NMICM}{NMI} \right)_{-1} \\
&\quad (5.11) \quad (1.29) \\
&- 0.38480 \left(\frac{100.NMIPP}{NMI} \right)_{-1} + 0.18517 \left(\frac{INA}{INA}_{-1} \right)_{-1} \\
&\quad (0.95) \quad (0.67) \\
&- 0.55554 QLT28 \\
&\quad (0.64)
\end{aligned}$$

$R^2 = 0.986$ S.E. = 0.027
 Sample Period 1957-1974

D.W. = 2.01
 D. = 0.03

(N.20) NMINF Employment, Non Ferrous Metallurgy

$$\begin{aligned}
\frac{100.NMINF}{NMI} &= 13.55024 + 0.09415 \left(\frac{100.NMIMB}{NMI} \right)_{-1} \\
&\quad (8.42) \quad (5.37) \\
(2.545) &- 0.14900 \left(\frac{100.NMIFM}{NMI} \right)_{-1} + 0.00897 \left(\frac{100.NMICM}{NMI} \right)_{-1} \\
&\quad (1.58) \quad (0.38) \\
&- 0.51352 \left(\frac{100.NMIPP}{NMI} \right)_{-1} - 0.49735 \left(\frac{INA}{INA}_{-1} \right)_{-1} \\
&\quad (2.22) \quad (3.17) \\
&- 3.62895 QLT28 \\
&\quad (7.31)
\end{aligned}$$

$R^2 = 0.994$ S.E. = 0.015
 Sample Period 1957-1974

D.W. = 1.69

(N.21) NMICH Employment, Chemical and Petrochemical

$$\begin{aligned}
 \frac{100.NMICH}{NMI} = & - 24.48975 + 0.07709 \left(\frac{100.NMIMB}{NMI} \right)_{-1} \\
 & (4.367) \quad (5.89) \quad (1.70) \\
 & + 2.16354 \left(\frac{100.NMIFM}{NMI} \right)_{-1} - 0.35113 \left(\frac{100.NMICM}{NMI} \right)_{-1} \\
 & (8.86) \quad (0.60) \quad (5.69) \\
 & - 0.35861 \left(\frac{100.NMIPP}{NMI} \right)_{-1} + 0.19999 \left(\frac{INA}{INA_{-1}} \right)_{-1} \\
 & (0.60) \quad (0.49) \\
 & + 5.22978 \text{ QLT28} \\
 & (4.08)
 \end{aligned}$$

$$R^2 = 0.998$$

$$S.E. = 0.039$$

$$D.W. = 2.03$$

Sample Period 1957-1974

(N.22) NMIMB Employment, Machine-Building and Metal-Working

$$\begin{aligned}
 \frac{100.NMIMB}{NMI} = & - 5.39107 + 0.69292 \left(\frac{100.NMIMB}{NMI} \right)_{-1} \\
 & (35.527) \quad (0.28) \quad (3.26) \\
 & + 0.53933 \left(\frac{100.NMIFM}{NMI} \right)_{-1} - 0.09105 \left(\frac{100.NMICM}{NMI} \right)_{-1} \\
 & (0.47) \quad (0.31) \\
 & - 8.73862 \left(\frac{100.NMIPP}{NMI} \right)_{-1} + 1.30840 \left(\frac{INA}{INA_{-1}} \right)_{-1} \\
 & (3.11) \quad (0.69) \\
 & + 6.08597 \text{ QLT28} \\
 & (1.01)
 \end{aligned}$$

$$R^2 = 0.998$$

$$S.E. = 0.185$$

$$D.W. = 1.98$$

Sample Period 1957-1974

$$D. = 0.10$$

(N.23) NMIFP Employment, Forest Products

$$\begin{aligned}
\frac{100.NMIFP}{NMI} &= 74.54399 + 0.15354 \left(\frac{100.NMIMB}{NMI} \right)_{-1} \\
(9.494) & \quad (9.82) \quad (1.86) \\
&- 2.45279 \left(\frac{100.NMIFM}{NMI} \right)_{-1} + 0.53978 \left(\frac{100.NMICM}{NMI} \right)_{-1} \\
& \quad (5.50) \quad (4.79) \\
&- 2.22294 \left(\frac{100.NMIPP}{NMI} \right)_{-1} + 1.17166 \left(\frac{INA}{INA}_{-1} \right)_{-1} \\
& \quad (2.04) \quad (1.58) \\
&- 16.78932 \text{ QLT28} \\
& \quad (7.17)
\end{aligned}$$

$$R^2 = 0.998 \quad \text{S.E.} = 0.072$$

Sample Period 1957-1974

$$D.W. = 1.95$$

(N.24) NMIPA Employment, Paper and Pulp

$$\begin{aligned}
\frac{100.NMIPA}{NMI} &= - 0.70658 - 0.00366 \left(\frac{100.NMIMB}{NMI} \right)_{-1} \\
(0.795) & \quad (0.58) \quad (0.28) \\
&+ 0.11410 \left(\frac{100.NMIFM}{NMI} \right)_{-1} - 0.07953 \left(\frac{100.NMICM}{NMI} \right)_{-1} \\
& \quad (1.59) \quad (4.38) \\
&+ 0.38651 \left(\frac{100.NMIPP}{NMI} \right)_{-1} - 0.04584 \left(\frac{INA}{INA}_{-1} \right)_{-1} \\
& \quad (2.21) \quad (0.39) \\
&+ 0.35829 \text{ QLT28} \\
& \quad (0.95)
\end{aligned}$$

$$R^2 = 0.869 \quad \text{S.E.} = 0.012$$

Sample Period 1957-1974

$$D.W. = 2.27$$

(N.25) NMICM Employment, Construction Materials

$$\begin{aligned}
\frac{100.NMICM}{NMI} &= 4.890314 - 0.01524 \left(\frac{100.NMIMB}{NMI} \right)_{-1} \\
(6.403) &\quad (0.53) \quad (0.15) \\
&- 0.83764 \left(\frac{100.NMIFM}{NMI} \right)_{-1} + 0.83163 \left(\frac{100.NMICM}{NMI} \right)_{-1} \\
&\quad (1.56) \quad (6.11) \\
&+ 2.69426 \left(\frac{100.NMIPP}{NMI} \right)_{-1} + 0.89869 \left(\frac{INA}{INA} \right)_{-1} (-1.) \\
&\quad (2.04) \quad (1.00) \\
&- 0.51361 QLT28 \\
&\quad (0.18)
\end{aligned}$$

$$R^2 = 0.902 \quad S.E. = 0.087$$

Sample Period 1957-1974

$$D.W. = 2.39$$

$$D. = 1.01$$

(N.26) NMISG Employment, Soft Goods

$$\begin{aligned}
\frac{100.NMISG}{NMI} &= 8.72831 - 0.37769 \left(\frac{100.NMIMB}{NMI} \right)_{-1} \\
(16.121) &\quad (0.52) \quad (2.07) \\
&- 0.80490 \left(\frac{100.NMIFM}{NMI} \right)_{-1} - 0.18900 \left(\frac{100.NMICM}{NMI} \right)_{-1} \\
&\quad (0.82) \quad (0.76) \\
&+ 8.61730 \left(\frac{100.NMIPP}{NMI} \right)_{-1} + 2.36205 \left(\frac{INA}{INA} \right)_{-1} (-1.) \\
&\quad (3.58) \quad (1.44) \\
&+ 4.91710 QLT28 \\
&\quad (0.95)
\end{aligned}$$

$$R^2 = 0.969 \quad S.E. = 0.159$$

Sample Period 1957-1974

$$D.W. = 1.95$$

(N.27) NMIPF Employment, Processed Foods

$$\begin{aligned}
\frac{100.NMIPF}{NMI} &= 2.16373 + 0.01298 \left(\frac{100.NMIMB}{NMI} \right)_{-1} \\
&\quad (0.33) \quad (0.18) \\
(9.380) & \\
&+ 1.36013 \left(\frac{100.NMIFM}{NMI} \right)_{-1} - 0.26066 \left(\frac{100.NMICM}{NMI} \right)_{-1} \\
&\quad (3.49) \quad (2.64) \\
&+ 3.00805 \left(\frac{100.NMIPP}{NMI} \right)_{-1} + 0.03012 \left(\frac{INA}{INA}_{-1} \right)_{-1} \\
&\quad (3.15) \quad (0.05) \\
&- 0.05106 QLT28 \\
&\quad (0.02)
\end{aligned}$$

$$R^2 = 0.966$$

$$S.E. = 0.063$$

$$D.W. = 1.77$$

Sample Period 1957-1974

(N.28) NMINC Employment, Industry NCE (Residual Branch)

$$\begin{aligned}
\frac{100.NMINC}{NMI} &= 8.30185 - 0.76564 \left(\frac{100.NMIMB}{NMI} \right)_{-1} \\
&\quad (0.25) \quad (2.12) \\
(3.863) & \\
&- 1.93307 \left(\frac{100.NMIFM}{NMI} \right)_{-1} - 0.51849 \left(\frac{100.NMICM}{NMI} \right)_{-1} \\
&\quad (0.99) \quad (1.05) \\
&- 6.52880 \left(\frac{100.NMIPP}{NMI} \right)_{-1} - 7.63250 \left(\frac{INA}{INA}_{-1} \right)_{-1} \\
&\quad (1.37) \quad (2.36) \\
&+ 11.08810 QLT28 \\
&\quad (1.08)
\end{aligned}$$

$$R^2 = 0.793$$

$$S.E. = 0.314$$

$$D.W. = 2.08$$

Sample Period 1957-1974

(N.29) NIET Engineering - Technical Employees in Industry (End Year)

$$\text{NIET-NIET}_{-1} = 0.16841 \quad \frac{\text{NEIND9} + \text{NEIND9}_{-1} + \text{NEIND9}_{-2}}{3.}$$

(13.38) (149.43)

$$- 159.08954 \text{ Q69ON}$$

(4.68)

$$+ 154.93 \quad \left\{ \frac{2.(\text{NIET}_{-1} - \text{NIET}_{-2})}{\text{NEIND9}_{-1} + \text{NEIND9}_{-2}} - 0.13548 \right\}$$

(0.68)

$$R^2 = 0.726 \quad \text{S.E.} = 32.39 \quad \text{D.W.} = 1.26$$

Sample Period 1960-1974

(N.30) NTSPA Specialists Employed in Transport and Communications

$$\text{NTSPA-NTSPA}_{-1} = 0.48120 \quad \left(\frac{\text{NETRA9}_{-1} + \text{NETRA9}_{-2}}{2} \right)$$

(36.28) (46.57)

$$+ 43.69719 \quad \left\{ \frac{2. * (\text{NTSPA}_{-1} - \text{NTSPA}_{-2})}{\text{NETRA9}_{-1} + \text{NETRA9}_{-2}} - 0.46308 \right\}$$

(3.11)

$$R^2 = 0.895 \quad \text{S.E.} = 5.00 \quad \text{D.W.} = 1.60$$

Sample Period 1960-1974

I. Investment(a) Non-Agricultural Investment, Sector Equations(1.1a) IIN Capital Investment in Industry

$$\begin{aligned} \frac{IIN}{IIN_{-1}} - 1. &= 0.05466 - 0.05963 \text{ (Q6567-3.*.0625)} \\ &\quad (5.99) \quad (4.85) \\ &\quad (0.075) \\ &\quad - 0.03976 \text{ (QFIN-2.*.065)} \\ &\quad \quad (3.16) \\ &\quad + 0.19254 \text{ GFI} + 0.17444 \text{ GPG} - 0.20077 \text{ GDF} \\ &\quad \quad (1.84) \quad (3.54) \quad (5.47) \end{aligned}$$

$$R^2 = 0.850 \quad S.E. = 0.016 \quad D.W. = 2.25$$

Sample Period 1959-1974

Where:

$$GFI = \frac{IFAJ^*/PII_{-1}}{IFAJ^*_{-1}/PII_{-2}} - 1.$$

$$GPG = \frac{ZPG^*/PII_{-1}}{ZPG^*_{-1}/PII_{-2}} - 1.$$

$$GDF = \frac{BDN^*9/PIWH70}{BDN^*9_{-1}/PIWH70_{-1}} - 1.$$

(1.2a) ICRUB Capital Investment in Construction

$$\begin{aligned} \frac{ICRUB}{ICRUB_{-1}} - 1. &= - 0.02885 \text{ QFYP} - 0.2937 + 0.04733 \text{ QSH72} \\ &\quad (0.99) \quad (0.62) \quad (1.39) \\ &\quad (0.093) \\ &\quad + 0.29562 \left(\frac{XAGT70}{XAGTN} - 1. \right) + 1.73640 \text{ GINA} \\ &\quad \quad (1.18) \quad \quad (2.71) \end{aligned}$$

$$R^2 = 0.666 \quad S.E. = 0.050 \quad D.W. = 2.85$$

Sample Period 1961-1974

Where:

$$GINA = \frac{INA}{INA_{-1}} - 1.$$

(I.3a) ITRUB Capital Investment in Transport and Communications

$$\begin{aligned} \frac{\text{ITRUB}}{\text{ITRUB}_{-1}} - 1. &= 0.10484 - 0.04073 \text{ QFYP} - 0.08481 (\text{Q6567-3} \cdot 0.0625) \\ &\quad (8.43) \quad (2.88) \quad (4.28) \\ &\quad (0.092) \\ &\quad - 0.04235 (\text{QFIN-2} \cdot 0.0625) + 0.15933 \text{ GFT} - 0.28087 \text{ GDF} \\ &\quad (2.24) \quad (2.57) \quad (4.89) \end{aligned}$$

$$R^2 = 0.814 \quad \text{S.E.} = 0.024 \quad \text{D.W.} = 2.02$$

Sample Period 1959-1974

Where:

GDF defined above under (I.1a)

$$\text{GFT} = \frac{\text{IFTR} \cdot 9 / \text{PIT}_{-1}}{\text{IFTR} \cdot 9_{-1} / \text{PIT}_{-2}}$$

(I.4a) IHS Capital Investment in Housing

$$\begin{aligned} \frac{\text{IHS}}{\text{IHS}_{-1}} - 1. &= 0.03603 - 0.00973 \text{ QSH72} (\text{QT50-23.}) - 0.14148 \text{ Q6064} \\ &\quad (5.45) \quad (5.44) \quad (9.70) \\ &\quad (0.038) \\ &\quad - 0.03536 (\text{Q69-} \cdot 0.0625) - 0.05472 \text{ GDF} \\ &\quad (2.37) \quad (1.52) \end{aligned}$$

$$R^2 = 0.935 \quad \text{S.E.} = 0.014 \quad \text{D.W.} = 2.20$$

Sample Period 1961-1974

GDF defined above under (I.1a)

(I.5a) ISER Capital Investment in Services and Domestic Trade

$$\begin{aligned} \frac{\text{ISER}}{\text{ISER}_{-1}} - 1. &= 0.06012 - 0.07719 \text{ QSH68} + 0.86893 \text{ GINA} \\ &\quad (2.31) \quad (4.58) \quad (3.14) \\ &\quad (0.076) \\ &\quad + 0.43488 \left(\frac{\text{XAGT70}}{\text{XAGTN}} + \frac{\text{XAGT70}_{-1}}{\text{XAGTN}_{-1}} - 2. \right) / 2. \\ &\quad (2.24) \end{aligned}$$

$$R^2 = 0.801 \quad \text{S.E.} = 0.030 \quad \text{D.W.} = 2.34$$

Sample Period 1959-1974

GINA defined above under (I.2a)

(I.6a) INA Capital Investment, Total Non-Agricultural

$$INA \equiv IIN + ICRUB + ITRUB + IHS + ISER$$

(b) Alternate Investment Model

Total Non-Agricultural Investment determined by equation (I.6b). Sectoral Investment determined by exogenous share variables in equations (I.1b) - (I.5b).

$$(I.1b) \quad IIN \equiv IRII9 * INA / 100.$$

$$(I.2b) \quad ICRUB \equiv IRIC9 * INA / 100.$$

$$(I.3b) \quad ITRUB \equiv IRIT9 * INA / 100.$$

$$(I.4b) \quad IHS \equiv IRIH9 * INA / 100.$$

$$(I.5b) \quad ISER \equiv IRIS9 * INA / 100.$$

(I.6b) INA Total Non-Agricultural Investment

$$\frac{INA}{INA_{-1}} - 1 = 0.07275 - 0.01958 \text{ QFYP} - 0.02834 \text{ (Q6567-3.*.0625)}$$

(0.068) (6.90) (1.68) (1.76)

$$- 0.04271 \text{ (QFIN-2.*.0625)} + 0.12956 \text{ GPG} - 0.14968 \text{ GDF}$$

(2.74) (2.12) (3.39)

$$R^2 = 0.713$$

$$S.E. = 0.020$$

$$D.W. = 1.58$$

Sample Period 1959-1974

GPG and GDF defined above under (I.1a)

(I.7) IA Capital Investment in Agriculture

$$\frac{IA}{IA_{-1}} - 1. = 0.05067 + 0.51408 GFA - 0.19307 GDF$$

(4.67) (5.14) (3.84)

(0.105)

$$+ 0.31392 \left(\frac{XAGT70}{XAGTN} - 1. \right) - 0.12747 \left(\frac{XAGT70_{-1}}{XAGTN_{-1}} - 1. \right)$$

(3.30) (1.38)

$$R^2 = 0.847$$

$$S.E. = 0.018$$

$$D.W. = 2.41$$

Sample Period 1961-1974

GDF defined above under (I.1a)

Where:

$$GFA = \frac{IFAG*9/PIA_{-1}}{IFAG*9_{-1}/PIA_{-2}} - 1.$$

(I.8) IFAJ* Adjusted Finance for Centralized Capital Investment

$$IFAJ* = IFIN*9 - 4.9 QSH68_{-1}$$

(I.9) ITOTAL Total New Capital Investment in the National Economy

$$ITOTAL \equiv INA + IA$$

(a) Branch Investment, Direct Functions(I.10a) IIEP Capital Investment, Electroenergy

$$\frac{IIEP}{IIEP_{-1}} - 1. = 0.02935 + 0.05151 QFYP - 0.06037 (Q6869-2*.0625)$$

(3.26) (3.69) (3.00)

(0.052)

$$- 0.06243 (Q74-.0625)$$

(2.17)

$$R^2 = 0.644$$

$$S.E. = 0.026$$

$$D.W. = 1.75$$

Sample Period 1959-1974

(I.11a) IICP Capital Investment, Coal Products

$$\frac{IICP}{IICP_{-1}} - 1. = 0.03138 + 0.04369 QFYP$$

(3.12) (3.18)

(0.032)

$$- 0.07639 (Q69+Q74 - 2 \cdot .0625) - 0.29462 GDF$$

(3.92) (5.96)

$$R^2 = 0.849 \quad S.E. = 0.023 \quad D.W. = 1.48$$

Sample Period 1961-1974

GDF defined above under (I.1a).

(I.12a) IIPP Capital Investment, Petroleum Products

$$\frac{IIPP}{IIPP_{-1}} - 1. = 0.02115 + 0.05256 QFYP - 0.13867 (Q69 - .0625)$$

(1.15) (3.28) (4.57)

(0.090)

$$+ 0.89909 GFI - 0.23682 GDF - 0.06849 (Q74 - .0625)$$

(3.94) (3.46) (2.11)

$$R^2 = 0.804 \quad S.E. = 0.026 \quad D.W. = 2.26$$

Sample Period 1961-1974

GFI and GDF defined above under (I.1a).

(I.13a) IIFM Capital Investment, Ferrous Metallurgy

$$\frac{IIFM}{IIFM_{-1}} - 1. = 0.13818 - 0.12914 QFYP - 0.09812 (Q6567-3 \cdot .0625)$$

(5.30) (3.34) (2.01)

(0.073)

$$- 0.07294 (Q69 - .0625) - 0.15492 GDF$$

(1.04) (1.09)

$$R^2 = 0.582 \quad S.E. = 0.065 \quad D.W. = 2.72$$

Sample Period 1959-1974

GDF defined above under (I.1a).

(I.14a) IINF Capital Investment, Non-Ferrous Metallurgy and Industry NEC

$$\frac{IINF}{IINF-1} - 1 = 0.03360 - 0.08412 (Q6567-3*.0625)$$

(1.29) (1.77)

(0.059)

$$- 0.04944 (QFIN-2*.0625) + 0.41587 GPG - 0.28059 GDF$$

(1.00) (2.16) (2.04)

$$R^2 = 0.458 \quad S.E. = 0.064 \quad D.W. = 2.80$$

Sample Period 1959-1974

GPG and GDF defined above under (I.1a).

(I.15a) IICH Capital Investment, Chemicals and Petrochemicals

$$\frac{IICH}{IICH-1} - 1 = 0.02821 + 0.16538 QSH65 - 0.13196 (Q6567-3*.0625)$$

(0.97) (4.13) (3.41)

(0.094)

$$+ 0.73257 GFI - 0.39119 GDF$$

(1.72) (2.65)

$$R^2 = 0.837 \quad S.E. = 0.055 \quad D.W. = 2.36$$

Sample Period 1961-1974

GFI and GDF defined above under (I.1a).

(I.16a) IIMB Capital Investment, Machine-Building and Metal-Working

$$\frac{IIMB}{IIMB-1} - 1 = 0.03686 - 0.03133 (Q6567-3*.0625)$$

(1.27) (1.16)

(0.102)

$$+ 0.08004 (Q70 - .0625)$$

(1.97)

$$+ 0.37440 GPG + 0.26504 \left(\frac{IIMB}{IIMB-1} - 1 \right) - 1$$

(3.00) (1.40)

$$R^2 = 0.714 \quad S.E. = 0.035 \quad D.W. = 2.28$$

Sample Period 1961-1974

D. = 0.75

GPG defined above under (I.1a)

(I.17a) IIFP Capital Investment, Forest Products

$$\frac{IIFP}{IIFP_{-1}} - 1. = 0.08938 - 0.13170 (Q6567-3.*.0625)$$

(6.91) (5.67)

(0.053)

$$- 0.10780 (QFIN + Q74 - 3.*.0625) - 0.31721 GDF$$

(4.86) (4.33)

$$- 0.32203 \left(\frac{IIFP}{IIFP_{-1}} - 1. \right)_{-1}$$

(2.25)

$$R^2 = 0.812 \quad S.E. = 0.033 \quad D.W. = 2.91$$

Sample Period 1959-1974 D. = 2.22

GDF defined above under (I.1a).

(I.18a) IICM Capital Investment, Construction Materials

$$\frac{IICM}{IICM_{-1}} - 1. = 0.00092 - 0.07839 (Q6264-3.*0.0625)$$

(0.02) (2.37)

(0.041)

$$+ 0.15350 (Q6869 - 2.*.0625) + 0.64446 \left(\frac{INA}{INA_{-1}} - 1. \right)$$

(4.01) (1.08)

$$R^2 = 0.750 \quad S.E. = 0.047 \quad D.W. = 2.47$$

Sample Period 1961-1974

(I.19a) IISG Capital Investment, Soft Goods

$$\frac{IISG}{IISG_{-1}} - 1. = 0.14023 - 0.10800 (QFIN + Q74 - 3.*0.0625)$$

(7.53) (4.41)

(0.094)

$$+ 0.10268 GPG + 0.16611 (Q66 - .0625)$$

(0.99) (4.26)

$$- 0.20767 GDF - 0.40822 \left(\frac{IISG}{IISG_{-1}} - 1. \right)_{-1}$$

(2.75) (3.93)

$$R^2 = 0.867 \quad S.E. = 0.036 \quad D.W. = 1.21$$

Sample Period 1959-1974 D. = 1.74

GPG and GDF defined above under (I.1a).

(I.20a) IIPF Capital Investment, Processed Foods

$$\frac{IIPF}{IIPF_{-1}} - 1. = 0.05281 - 0.04234 (Q6567 - 3.*.0625)$$

$$(3.71) \quad (1.57)$$

(0.048)

$$- 0.04223 (Q69 - .0625) + 0.27581 GPG$$

$$(1.16) \quad (2.59)$$

$$- 0.46106 GDF$$

$$(5.99)$$

$$R^2 = 0.823$$

$$S.E. = 0.035$$

$$D.W. = 2.15$$

Sample Period 1961-1974

GPG and GDF defined above under (I.1a).

(b) Branch Investment, Share Equations

$$(I.10b) \quad IIEP \equiv IREP9 * IIN$$

$$(I.11b) \quad IICP \equiv IRCP9 * IIN$$

$$(I.12b) \quad IIPP \equiv IRPP9 * IIN$$

$$(I.13b) \quad IIFM \equiv IRFM9 * IIN$$

$$(I.14b) \quad IINF \equiv IRNF9 * IIN$$

$$(I.15b) \quad IICH \equiv IRCH9 * IIN$$

$$(I.16b) \quad IIMB \equiv IRMB9 * IIN$$

$$(I.17b) \quad IIFP \equiv IRFP9 * IIN$$

$$(I.18b) \quad IICM \equiv IRCM9 * IIN$$

$$(I.19b) \quad IISG \equiv IRSG9 * IIN$$

$$(I.20b) \quad IIPF \equiv IRPF9 * IIN$$

(I.21) I70T Change in Inventories, Domestic Trade

$$I70T = - 2.27542 - 0.50968 IS70T_{-1} + 0.39720 XILT^*$$

(2.249) (1.66) (6.01) (5.51)

$$+ 0.14637 (XILT - CRND70 - CRD70)$$

(2.06)

$$- 0.06053 (XAGT70_{-1} - XAGTN_{-1})$$

(1.72)

$$- 0.37225 \left(\frac{100.BDN^*9}{PIWH70} - \frac{100.BDN^*9_{-1}}{PIWH70_{-1}} - 0.48824 \right)$$

(2.69)

$$R^2 = 0.824 \quad S.E. = 0.443 \quad D.W. = 2.49$$

Sample Period 1958-1972

Where: $XILT = 0.27291 XISG + 0.39034 XIPF$,

and:

$$X^* \equiv X_{-1} \left(.1 \frac{X_{-1}}{X_{-2}} + .4 \frac{X_{-2}}{X_{-3}} + .4 \frac{X_{-3}}{X_{-4}} + .1 \frac{X_{-4}}{X_{-5}} \right),$$

a projection based on four previous growth rates.

(I.22) IS70T Stock of Inventories, Domestic Trade (End Year)

$$IS70T \equiv IS70T_{-1} + I70T$$

(I.23) I70NTA Change in Inventories, Non-Trade, Non-Agriculture

$$I70NTA = 2.37632 - 0.41277 IS70NTA_{-1} + 0.47275 XIH^*$$

(6.156) (1.33) (2.46) (2.58)

$$- 0.84795 (XIH^* - XIH - .2342) + 5.60397 Q66$$

(1.45) (2.95)

$$R^2 = 0.692 \quad S.E. = 1.811 \quad D.W. = 1.51$$

Sample Period 1958-1972

(I.23) I70NTA Change in Inventories, Non-Trade, Non-Agriculture
(Continued)

Where: $XIH = 1.71449 XIT - 0.27291 XISG - 0.39034 XIPF$

and: XIH^* defined under (I.21) above.

(I.24) IS70NTA Stock of Inventories, Non-Trade, Non-Agricultural
(End-Year)

$$IS70NTA = IS70NTA_{-1} + I70NTA$$

(I.25) ICAPREP Capital Repair: Index

$$\frac{18.611 \text{ ICAPREP}}{\text{KSUM}} = 2.76293 - 0.01728 \text{ (QT50-22.) QSH71}$$

(208.8) (8.39)

(2.811)

$$- 0.09793 \text{ Q62} - 0.12222 \text{ Q6870}$$

(3.51) (6.81)

$$R^2 = 0.945 \quad \text{S.E.} = 0.025 \quad \text{D.W.} = 1.64$$

Sample Period 1960-1973

(I.26) ISUM Total Investment, National Economy

$$ISUM \equiv ITOTAL + .18611 \text{ ICAPREP} + I70NTA + I70T$$

$$+ (\text{ALVR70} - \text{ALVR70}_{-1})$$

K CAPITAL(K.1) KITOT Industrial Basic Funds (Capital Stock) (Jan. 1)

$$KITOT_{+1} \equiv KITOT + KNDI$$

(K.2) KIA Adjusted Industrial Basic Funds (Jan. 1)

$$KIA_{+1} \equiv KITOT_{+1} - KIT589 - KIH629$$

(K.3) KNDI Industrial Capital Formation

$$KNDI + 0.05 KITOT = 1.29293 \text{ (QFYP-0.4375)} + 0.1275 IIN$$

(23.120) (2.51) (0.40)

$$+ 0.3274 IIN_{-1} + 0.3728 IIN_{-2}$$

(18.70) (2.04)

$$+ 0.2637 IIN_{-3}$$

(1.49)

$$R^2 = .986 \quad S.E. = 1.006 \quad D.W. = 1.86$$

Sample Period 1959-1974

Distributed Lag: Quadratic, 4-Period, Zero-constrained
in 5th Period.

(K.4) KCR Construction Basic Funds (Jan. 1)

$$KCR_{+1} \equiv KCR + KNDC$$

(K.5) KNDC Construction Capital Formation

$$KNDC + 0.06 KCR = 0.27781 (QPL5-0.47) + 1.02686 ICRUB$$

(2.178) (1.82) (31.82)

$$R^2 = .934 \quad S.E. = 0.313 \quad D.W. = 2.21$$

Sample Period 1958-1974

(K.6) KTR Transport and Communications Basic Funds (Jan. 1)

$$KTR_{+1} \equiv KTR + KNDC$$

(K.7) KTA Adjusted Transport and Communications Basic Funds (Jan. 1)

$$KTA_{+1} \equiv KTR_{+1} + KIT589$$

(K.8) KNDC Transport and Communications Capital Formation

$$KNDC + 0.025 KTR = 2.50957 (Q65-0.0625) + 0.61852 (ITRUB+ITRUB_{-1})$$

(7.844) (3.79) (51.07)

$$R^2 = .938 \quad S.E. = 0.640 \quad D.W. = 1.09$$

Sample Period 1959-1974

(K.9) KTCUS Freight Car Utilization Rate

$$\text{KTCUS} = 182.420 \text{ QSH65} + 3.97245 \text{ QSH65} * \text{QT50}$$

(242.8) (36.86) (9.79)

$$+ 233.239 (1. - \text{QSH65}) + 0.97800 (1. - \text{QSH65}) * \text{QT50}$$

(47.56) (4.13)

$$- 15.84557 \left(\frac{\text{BDN}^*9/\text{PIWH70}}{\text{BDN}^*9_{-1}/\text{PIWH70}_{-1}} - 1. \right)$$

(3.35)

$$R^2 = 0.982 \quad \text{S.E.} = 2.15 \quad \text{D.W.} = 2.28$$

Sample Period 1958-1974

(K.10.) KCOM Basic Funds, Domestic Trade (Jan. 1)

$$\text{KCOM}_{+1} = \text{KCOM} + \text{KNCOM}$$

(K.11) KNCOM Capital Formation, Domestic Trade

$$\text{KNCOM} + 0.02 \text{ KCOM} = 3.51814 \text{ Q65} + 2.06880 (\text{Q68-Q69})$$

(2.367) (7.36) (6.24)

(K.11) KNCOM Capital Formation, Domestic Trade, Continued

$$+ 0.102886 \text{ (ISER}_{-1} + \text{ISER}_{-2})$$

(18.25)

$$R^2 = 0.903 \quad \text{S.E.} = 0.469 \quad \text{D.W.} = 1.43$$

Sample Period 1960-1974

(K.12) KHBF Basic Funds, Housing (Jan. 1)

$$\text{KHBF}_{+1} \equiv \text{KHBF} + \text{KNDH}$$

(K.13) KNDH Housing Capital Formation

$$\text{KNDH} + 0.02 \text{ KHBF} = - 0.62710 \text{ (QFYP-0.467)} + 7.74913 \text{ Q62}$$

(10.945) (1.36) (8.83)

$$+ 0.45700 \text{ (IHS} + \text{IHS}_{-1}) - 6.45250 \text{ (Q74-0.067)}$$

(49.31) (7.21)

$$R^2 = 0.925 \quad \text{S.E.} = 0.811 \quad \text{D.W.} = 2.60$$

Sample Period 1960-1974

(K.14) KHA Adjusted Housing Basic Funds (Jan. 1)

$$KHA_{+1} \equiv KHB_{+1} + \frac{7.84}{1.74} KIH \ 629$$

(K.15) KSER Basic Funds, Services (Jan. 1)

$$KSER_{+1} \equiv KSER + KNSER$$

(K.16) KNSER Services Capital Formation

$$KNSER + 0.02 KSER = 0.84631 (QFYP - 0.467) + 4.32465 Q63$$

(0.94) (2.68)

(9.168)

$$- 2.81349 (QFIN_{-1} - 0.133) + 0.49679 (ISER_{-3} + ISER_{-4})$$

(2.17) (24.39)

$$R^2 = 0.875 \quad S.E. = 1.469 \quad D.W. = 1.19$$

Sample Period 1960-1974

(K.17) KAIR Agricultural Basic Funds (excl. Productive Livestock) (mid-year)

$$KAIR - 0.95 KAIR_{-1} = 0.55756 QPL7 + 0.67846 \left(\frac{IA + IA_{-1}}{2} \right)$$

(6.45) (2.65) (48.16)

$$R^2 = .976 \quad S.E. = 0.430 \quad D.W. = 1.82$$

Sample Period 1957-1972

(K.18) KIW Industrial Capital, Western Machinery (End Year Value)

$$KIW \equiv 0.95 KIW_{-1} + 0.0712 (MIEIN\$ / PREX9.P71GE9)_{-1}$$

(K.19) KIEP Basic Funds, Electroenergy (Jan. 1)

$$KIEP_{+1} \equiv KIEP + KNIEP$$

(K.20) KNIEP Capital Formation, Electroenergy

$$\text{KNIEP} + 0.04 \text{ KIEP} = -0.12905 (\text{QFYP} - 0.4375) + 2.07170 \text{ IIEP}$$

$$(3.476) \qquad (0.43) \qquad (2.16)$$

$$- 1.47324 \quad (\text{IIEP}_{-1} + \text{IIEP}_{-2})$$

$$(2.26)$$

$$+ 1.22625 \quad (\text{IIEP}_3 + \text{IIEP}_4)$$

$$(3.33)$$

$$R^2 = 0.898 \quad \text{S.E.} = 0.459 \quad \text{D.W.} = 2.80$$

Sample Period 1959-1974

(K.21) KICP Basic Funds, Coal Products (Jan. 1)

$$KICP_{+1} \equiv KICP + KNICP$$

(K.22) KNICP Capital Formation, Coal Products

$$\text{KNICP} + 0.03 \text{ KICP} = 0.12458 \text{ (QFYP - 0.4375)} - 0.30790 \text{ Q68}$$

(4.04) (4.85)

(0.812)

$$+ 0.19906 \text{ (IICP + IICP}_{-1} + \text{IICP}_{-2})$$

(54.31)

$$R^2 = 0.893 \quad \text{S.E.} = 0.060 \quad \text{D.W.} = 2.38$$

Sample Period 1959-1973

(K.23) KIPP Basic Funds, Petroleum Products (Jan. 1)

$$\text{KIPP}_{+1} = \text{KIPP} + \text{KNIPP}$$

(K.24) KNIPP Capital Formation, Petroleum Products

$$\text{KNIPP} - 0.025 \text{ KIPP} = - 0.36390 \text{ (QFYP - 0.4375)}$$

(1.90)

(1.564) - 0.56143 (Q6567 - 0.1875)

(2.31)

$$+ 0.20093 \text{ (IIPP + IIPP}_{-1} + \text{IIPP}_{-2})$$

(20.19)

$$R^2 = 0.361 \quad \text{S.E.} = 0.344 \quad \text{D.W.} = 1.56$$

Sample Period 1959-1974

(K.25) KIFM Basic Funds, Ferrous Metallurgy (Jan.1)

$$\text{KIFM} = \text{KIFM} + \text{KNIFM}$$

(K.26) KNIFM Capital Formation, Ferrous Metallurgy

$$\begin{array}{rcl} \text{KNIFM} + 0.05 \text{ KIFM} & = & 0.41777 \quad (\text{IIFM} + \text{IIFM}_{-1} + \text{IIFM}_{-2}) \\ (2.316) & & (33.36) \end{array}$$

$$R^2 = 0.824 \quad \text{S.E.} = 0.287 \quad \text{D.W.} = 2.68$$

Sample Period 1959-1974

(K.27) KICH Basic Funds, Chemicals and Petrochemicals (Jan. 1)

$$\text{KICH}_{+1} \equiv \text{KICH} + \text{KNICH}$$

(K.28) KNICH Capital Formation, Chemicals and Petrochemicals

$$\begin{array}{rcl} \text{KNICH} + 0.04 \text{ KICH} & = & 0.68586 \quad (\text{QFYP} - 0.4375) \\ (2.152) & & (3.14) \end{array}$$

$$+ 0.58158 \quad (\text{IICH}_{-1} + \text{IICH}_{-2})$$

(20.99)

$$R^2 = 0.823 \quad \text{S.E.} = 0.433 \quad \text{D.W.} = 2.35$$

Sample Period 1959-1974

(K.29) KIMB Basic Funds, Machine-Building and Metal-Working
(Jan. 1)

$$\text{KIMB}_{+1} \equiv \text{KIMB} + \text{KNIMB}$$

(K.30) KNIMB Capital Formation, Machine-Building and Metal-Working

$$\text{KNIMB} + 0.05 \text{ KIMB} = 0.27786 \text{ (QFYP - 0.4275)} \\ (4.952) \quad (1.47)$$

$$+ 0.81632 \text{ (Q66 - 0.0625)} \\ (2.11)$$

$$+ 0.59136 \text{ (IIMB + IIMB}_{-1}) \\ (59.06)$$

$$R^2 = 0.978 \quad \text{S.E.} = 0.364 \quad \text{D.W.} = 1.85 \\ \text{Sample Period 1959 - 1974}$$

(K.31) KIFP Basic Funds, Forest Products (Jan. 1)

$$\text{KIFP}_{+1} \equiv \text{KIFP} + \text{KNIFP}$$

(K.32) KNIFP Capital Formation, Forest Products

$$\text{KNIFP} + 0.045 \text{ KIFP} = 0.15823 \text{ (QFYP - 0.4375)} \\ (1.068) \quad (2.10)$$

$$+ 0.45471 \text{ (IIFP + IIFP}_{-1}) \\ (29.76)$$

$$R^2 = 0.841 \quad \text{S.E.} = 0.149 \quad \text{D.W.} = 1.32 \\ \text{Sample Period 1959-1974}$$

(K.33) KICM Basic Funds, Construction Materials (Jan.1)

$$\text{KICM}_{+1} \equiv \text{KICM} + \text{KNICM}$$

(K.34) KNICM Capital Formation, Construction Materials

$$\text{KNICM} + 0.04 \text{ KICM} = - 1.25157 \text{ (Q70 - 0.0625)}$$

$$(6.87)$$

(1.372)

$$+ 0.4167 \text{ IICM}$$

$$(2.02)$$

$$+ 0.3131 \text{ IICM}_{-1} + 0.2092 \text{ IICM}_{-2}$$

$$(22.87) \quad (1.80)$$

$$+ 0.1048 \text{ IICM}_{-3}$$

$$(0.93)$$

$$R^2 = 0.897 \quad \text{S.E. } 0.171 \quad \text{D.W.} = 1.71$$

$$\text{Sample Period } 1959-1974$$

Distributed Lag estimation: Quadratic, 4-Period,
Zero-Constrained in
5th Period.

(K.35) KISG Basic Funds, Soft Goods (Jan. 1)

$$\text{KISG}_{+1} \equiv \text{KISG} + \text{KNISG}$$

(K.36) KNISG Capital Formation, Soft Goods

$$\text{KNISG} + 0.05 \text{ KISG} = 0.6133 \text{ IISG} + 0.3529 \text{ IISG}_{-1}$$

$$(1.06) \quad (1.53)$$

(1.046)

$$+ 0.1485 \text{ IISG}_{-2}$$

$$(0.35)$$

(K.36) KNISG Capital Formation, Soft Goods, Continued

$R^2 = 0.857$ S.E. = 0.162 D.W. = 2.13
Sample Period 1959-1974

Distributed Lag estimation: Quadratic, 3-Period, Zero
Constrained in 4th Period.

(K.37) KIPF Basic Funds, Processed Foods (Jan. 1)

$$KIPF_{+1} \equiv KIPF + KNIPF$$

(K.38) KNIPF Capital Formation, Processed Foods

$KNIPF + 0.05 KIPF = 0.94467$ (Q61 - Q62)
(1.852) (6.01)

+ 0.1405 IIPF
(0.39)

+ 0.4867 $IIPF_{-1} + 0.4399$ $IIPF_{-2}$
(3.46) (1.68)

$R^2 = 0.903$ S.E. = 0.221 D.W. = 1.58
Sample Period 1959 - 1974

Distributed Lag estimation: Quadratic, 3-Period,
Zero-constrained in
4th Period.

(K.39) KSUM Basic Funds, National Economy (Mean Year)

$$KSUM \equiv KAIR + \frac{1}{2} (KIA + KCR + KTA + KCOM + KHA + KSER)_{+1} \\ + \frac{1}{2} (KIA + KCR + KTA + KCOM + KHA + KSER)$$

(K.40) KIPPM Basic Funds: Petroleum Products, Machinery Imports

$$KIPPM \equiv 0.95 KIPPM_{-1} + .0712 (MTM120-9*/P71GE9)_{-1}$$

(K.41) KICHW Basic Funds: Chemicals and Petrochemicals, Western Machinery Imports

$$KICHW \equiv 0.95 KICHW_{-1} + .0712 (MIECH$/PREX9.P71GE9)_{-1}$$

(K.42) KIMBM Basic Funds: Machine-Building, Machinery Imports

$$KIMBM \equiv 0.95 KIMBM_{-1} + .0712 (MTM100-5*/P71GE9)_{-1}$$

A. Agricultural Variables(A.1) ALVR70 Value of Productive Livestock (End-Year)

$$\frac{ALVR70}{ALVR70_{-1}} - 0.95 = 1.55785 - 0.67837 QLT28$$

(3.24) (3.21)

(0.0784)

$$+ 0.01668 KWAL9 + 2.05350 \frac{AFEED70}{ALVR70_{-1}}$$

(2.34) -1 (2.84)

$$R^2 = 0.470 \quad S.E. = 0.039 \quad D.W. = 2.10$$

Sample Period 1959-1974

(A.2) AVCP70 Value of Agricultural Current Purchases

$$\frac{100 \cdot AVCP70}{XAGTN} = 2.50195 + 0.42954 QT50$$

(8.91) (28.21)

(9.99)

$$+ 2.08567 \left(\frac{XAGT70}{XAGTN} - 1. \right)$$

(1.86)

$$R^2 = 0.988 \quad S.E. = 0.25 \quad D.W. = 1.13$$

Sample Period 1959-1974

(A.3) AFEED70 Value of Feed Fed to Livestock

$$100 \cdot \frac{AFEED70}{ALV} = -12.15528 + 5.58824 QLT28$$

(2.83) (4.82)

(7.980)

$$+ 6.60336 \left(\frac{XCROP70}{XACN} + \frac{XCROP70_{-1}}{XACN_{-1}} - 2. \right)$$

(4.43)

$$R^2 = 0.850 \quad S.E. = 0.496 \quad D.W. = 1.75$$

Sample Period 1959-1974

Where: $ALV = ALVR70_{-1} + ALVR70$

X. Production

(X.1) XAGT70 Total Agricultural Output (Two-Stage Determination)

(i) Normal Output: Linked Second-Peak XAGT70

$$\ln XAGTN - 0.30 \ln NAT - .03 \ln ALVR70 -.12 \ln AVCP70$$

(2.813)

$$= 1.95612 + 0.21378 \ln KAIR$$

(51.14) (22.51)

$$R^2 = 0.973 \quad S.E. = 0.015 \quad D.W. = 0.71$$

Sample Period 1959-1974

Actual Output: Fitted Values for XAGTN used in Second-stage

(ii) $\ln XAGT70 - \ln XAGTN = -0.02514 + 0.09505 JPS9 + 0.66702 JTW9$

(-0.016) (3.08) (4.89) (3.91)

$$R^2 = 0.790 \quad S.E. = 0.032 \quad D.W. = 1.98$$

Sample Period 1959-1974

XAGT70

Accuracy of Fit: 0.972
 Mean Abs. Error: 1.49 B. 1970 Rubles
 Largest Error: -3.99 B. 1970 Rubles (1974)

(X.2) XCROP70 Value of Total Crops

Normal Output: Linked Second-Peak XCROP70

(i) $\ln XACN - 0.30 \ln NAT = 1.23866$

(2.382) (9.23)

$$+ 0.17318 \ln KAIR + 0.23230 \ln AVCP70$$

(2.19) (2.44)

$$R^2 = 0.995 \quad S.E. = 0.012 \quad D.W. = 0.91$$

Sample Period 1959-1974

Actual Output: Fitted XACN used in Second-stage Estimation

$$\begin{aligned}
 \text{(ii)} \quad \ln \text{XCROP70} - \ln \text{XACN} &= -0.04463 + 0.09866 \text{ JPS9} \\
 &\quad (-0.0355) \quad (2.85) \quad (2.64) \\
 &\quad + 0.55969 \ln \text{JTW9} \\
 &\quad (1.71)
 \end{aligned}$$

$$\begin{aligned}
 R^2 &= 0.485 & \text{S.E.} &= 0.061 & \text{D.W.} &= 2.39 \\
 \text{Sample Period} &1959-1974
 \end{aligned}$$

XCROP70

Accuracy of Fit: 0.892
 Mean Absolute Errors: 1.49 B. 1970 Rubles
 Largest Error: -4.28 B. 1970 Rubles (1974)

(X.3) XANIM70 Gross Livestock ProductionNormal Output: First-stage Estimation

$$\begin{aligned}
 \text{(i)} \quad \ln \text{XAN} &= 0.95622 + 0.51808 \ln \text{ALV} \\
 &\quad (3.854) \quad (1.97) \quad (3.84) \\
 &\quad + 5.17423 \frac{\text{AFEEED70}}{\text{ALV}} \\
 &\quad (8.37)
 \end{aligned}$$

$$\begin{aligned}
 R^2 &= 0.937 & \text{S.E.} &= 0.046 & \text{D.W.} &= 1.76 \\
 \text{Sample Period} &1959-1974
 \end{aligned}$$

$$\text{Where: } \text{ALV} = \frac{\text{ALVR70}_{-1} + \text{ALVR70}}{2}$$

Actual Output: Residuals of (i) used in Second-stage Estimation

$$\begin{aligned}
 \text{(ii)} \quad \ln \text{XANIM70} - \ln \text{XAN} &= 0.00746 + 0.20561 \left(\frac{\text{XGRT}}{\text{XGRTN}} - 1 \right) \\
 &\quad (0.00) \quad (0.72) \quad (2.04)
 \end{aligned}$$

$$\begin{aligned}
 R^2 &= 0.229 & \text{S.E.} &= 0.039 & \text{D.W.} &= 1.62 \\
 \text{Sample Period} &1959-1974
 \end{aligned}$$

XANIM70

Accuracy of Fit: 0.948
 Mean Absolute Error: 1.55 B. 1970 Rubles
 Largest Sample Error: -3.90 B. 1970 Rubles (1973)

(X.4) XMEAT70 Value of Meat Produced

Normal Output: First-stage Estimation

$$(i) \quad \ln \text{XAM} = -1.64513 + 1.09080 \ln \text{ALV} + 3.26202 \frac{\text{AFEE70}}{\text{ALV}}$$

(3.238) (2.67) (6.38)

$$R^2 = 0.916 \quad \text{S.E.} = 0.058 \quad \text{D.W.} = 2.06$$

Sample Period 1959-1974

$$\text{Where: } ALV = \frac{ALVR70_{-1} + ALVR70}{2}$$

Actual Output: Residuals of (i) used in Second-stage Estimation

$$(ii) \quad \ln \text{XMEAT70} - \ln \text{XAM} = -0.01023 - 0.31995 \left(\frac{\text{XCROP70}}{\text{XACN}} - 1. \right)$$

$(0.00) \qquad (0.76) \qquad (1.91)$

$$R^2 = 0.207 \quad \text{S.E.} = 0.050 \quad \text{D.W.} = 1.65$$

Sample Period 1959-1974

XMEAT70

Accuracy of Fit: 0.948
Mean Absolute Error: 0.805 B. 1970 Rubles
Largest Sample Error: -2.78 B. 1970 Rubles (1964)

(X.5) XGRT Total Grain Production (Official Series)

Normal Output (Interpolated Second-peak series)

$$(i) \quad \ln \text{XGRTN} - 0.30 \ln \left[\frac{\text{NASK} + \text{NASK}_{-1} + \text{NASK}_{-2}}{3} \right] = 0.53238$$

$$(4.063) \qquad \qquad \qquad (1.75)$$

$$+ 0.36430 \ln \text{ASGR9} + 0.43005 \ln \text{KAIR}$$

$$(6.15) \qquad \qquad \qquad (48.60)$$

$$R^2 = 0.995 \quad \text{S.E.} = .013 \quad \text{D.W.} = 1.18$$

Sample Period 1959-1973

Actual Output (Fitted values used for XGRTN)

$$(ii) \quad \ln XGRT - \ln XGRTN = - 0.03595 + 0.10922 JPS9$$

$$(-0.042) \quad (2.17) \quad (2.73)$$

$$+ 1.30996 JTW9 - 0.16894 Q65$$

$$(4.01) \quad (2.60)$$

$$R^2 = 0.781 \quad S.E. = 0.061 \quad D.W. = 1.91$$

Sample Period 1959-1973

Fit Statistic for XGRT: 0.938
 Mean Absolute Error: 6.2 M. Metric Tons

(X.6) XGR Net Grain Production (Western Estimate)Capacity Output: Linked Second-Peak XGR

$$(i) \quad \ln XGRPK = - 0.24857 + 0.53782 \ln KAIR$$

$$(4.629) \quad (0.18) \quad (13.10)$$

$$+ 0.83028 \ln NASK$$

$$(2.25)$$

$$R^2 = 0.989 \quad S.E. = 0.020 \quad D.W. = 0.37$$

Sample Period 1959-1973

Actual Output: Fitted values of (i) used in Regression

$$(ii) \quad \ln XGR - \ln XGRPK = - 0.07125 + 0.11648 JPS9$$

$$(-.079) \quad (4.27) \quad (2.94)$$

$$+ 1.50461 JTW9 - 0.19986 Q65$$

$$(4.58) \quad (3.06)$$

$$R^2 = 0.820 \quad S.E. = 0.061 \quad D.W. = 2.72$$

Sample Period 1959-1973

(X.7) EP Branch Output: Electroenergy(a) Primary Factors

$$(XIEP/XIEP_{-1}^{-1}) - 0.03 = 0.69574 \text{ (NMIEP/NMIEP}_{-1}^{-1}.) \\ (7.53) \\ (0.063)$$

$$+ 0.28360 \text{ (KIEP/KIEP}_{-1}^{-1}) - 0.04202 \text{ Q66} \\ (7.18) \quad (3.48)$$

$$R^2 = 0.761 \quad S.E. = 0.011 \quad D.W. = 1.57 \\ \text{Sample Period 1959-1974} \quad \text{Fit} = 0.9995$$

(b) Material Inputs

$$(XIEP/XIEP_{-1}^{-1}) = 0.89931 \text{ (NMIEP/NMIEP}_{-1}^{-1}.) \\ (5.82) \\ (0.094)$$

$$+ 0.29315 \text{ (KIEP/KIEP}_{-1}^{-1}.) \\ (4.19)$$

$$+ 0.05127 \text{ (UEP/UEP}_{-1}^{-1}.) + 0.03123 \text{ QSH68} \\ (1.28) \quad (3.69)$$

$$R^2 = 0.546 \quad S.E. = 0.015 \quad D.W. = 1.90 \\ \text{Sample Period 1960-1972} \quad \text{Fit} = 0.9987$$

(X.8) XICP Branch Output: Coal Products(a) Primary Factors

$$(XICP/XICP_{-1}^{-1}) - 0.01 = 0.18342 \text{ (NMICP/NMICP}_{-1}^{-1}.) \\ (1.68) \\ (0.014)$$

$$+ 0.34038 \text{ (KICP/KICP}_{-1}^{-1}) - 0.02939 \text{ Q61} \\ (6.93) \quad (3.42)$$

$$R^2 = 0.488 \quad S.E. = 0.008 \quad D.W. = 2.11 \\ \text{Sample Period 1960-1974} \quad \text{Fit} = 0.9954$$

(b) Material Inputs

$$(XICP/XICP_{-1}-1.) = 0.17498 \text{ (NMICP/NMICP}_{-1}-1) \\ (1.17) \\ (0.024)$$

$$+ 0.46738 \text{ (KICP/KICP}_{-1}-1.) \\ (4.96)$$

$$+ 0.04753 \text{ (UCP/UCP}_{-1}-1.) - 0.03066 \text{ Q61} \\ (0.69) \quad (2.82)$$

$$R^2 = 0.396 \quad \text{S.E.} = 0.010 \quad \text{D.W.} = 1.90 \\ \text{Sample Period 1960-1972} \quad \text{Fit} = 0.9919$$

(X.9) XIPP Branch Output: Petroleum Products(a) Primary Factors

$$(XIPP/XIPP_{-1}-1) - .373 \text{ (NMIPP/NMIPP}_{-1}-1) \\ (0.081)$$

$$= 0.46455 \left(\frac{KIPP-KIPPM}{KIPP_{-1}-KIPPM_{-1}} -1. \right) \\ (6.10)$$

$$+ 0.09537 \text{ (KIPPM/KIPPM}_{-1}-1.) + 0.04830 \text{ Q5963} \\ (1.53) \quad (3.72)$$

$$R^2 = 0.550 \quad \text{S.E.} = 0.018 \quad \text{D.W.} = 2.34 \\ \text{Sample Period 1959-1974} \quad \text{Fit} = .9971$$

(b) Material Inputs

$$(XIPP/XIPP_{-1}-1.) - .373 \text{ (.604) (NMIPP/NMIPP}_{-1}-1.) \\ (0.083)$$

$$= 0.42862 \left(\frac{KIPP-KIPPM}{KIPP_{-1}-KIPPM_{-1}} -1. \right) \\ (3.63)$$

$$+ 0.07810 \text{ (KIPPM/KIPPM}_{-1}-1.) \\ (1.16)$$

$$+ 0.14335 \text{ (UPP/UPP}_{-1}-1.) + 0.04774 \text{ Q5963} \\ (1.79) \quad (3.95)$$

$$R^2 = 0.594 \quad \text{S.E.} = 0.016 \quad \text{D.W.} = 2.75 \\ \text{Sample Period 1960-1972} \quad \text{Fit} = .9978$$

(X.10) XIFM Branch Output: Ferrous Metallurgy(a) Primary Factors

$$(XIFM/XIFM_{-1}^{-1.}) - 0.02 = 1.05757 \text{ (NMIFM/NMIFM}_{-1}^{-1.})$$

(3.18)

(0.042)

$$+ 0.16381 \text{ (KIFM/KIFM}_{-1}^{-1.})$$

(1.91)

$$R^2 = 0.453$$

$$S.E. = 0.017$$

$$D.W. = 1.96$$

Sample Period 1959-1974

$$Fit = 0.9977$$

(b) Material Inputs

$$(XIFM/XIFM_{-1}^{-1.}) - 0.02 = 0.81606 \text{ (NMIFM/NMIFM}_{-1}^{-1.})$$

(3.58)

(0.042)

$$+ 0.03550 \text{ (KIFM/KIFM}_{-1}^{-1.})$$

(0.42)

$$+ 0.26690 \text{ (UNE/UME}_{-1}^{-1.})$$

(2.64)

$$R^2 = 0.738$$

$$S.E. = 0.010$$

$$D.W. = 2.70$$

Sample Period 1960-1972

$$Fit = 0.9982$$

(X.11) XINF Branch Output: Nonferrous Metallurgy(a) Primary Factors

$$(XINF/XINF_{-1}^{-1.}) - 0.02 = 0.60945 \text{ (NMINF/NMINF}_{-1}^{-1.})$$

(1.72)

(0.056)

$$+ 0.32526 \text{ (KIFM/KIFM}_{-1}^{-1.}) + 0.03195 \text{ Q6670}$$

(3.83) (3.99)

$$R^2 = 0.090$$

$$S.E. = 0.016$$

$$D.W. = 2.01$$

Sample Period 1959-1974

$$Fit = 0.9981$$

(b) Material Inputs

$$(XINF/XINF_{-1} - 1.) - 0.02 = 0.38023 \text{ (NMINF/NMINF}_{-1} - 1.) \\ (0.058) \quad (1.16)$$

$$+ 0.29229 \text{ (KIFM/KIFM}_{-1} - 1.) \\ (2.65)$$

$$+ 0.10963 \text{ (UME/UME}_{-1} - 1.) + 0.02934 \text{ Q6670} \\ (0.71) \quad (3.58)$$

$$R^2 = .361 \quad S.E. = 0.014 \quad D.W. = 2.53 \\ \text{Sample Period 1960-1972} \quad \text{Fit} = 0.9984$$

(X.12) XICH Branch Output: Chemicals and Petrochemicals(a) Primary Factors

$$(XICH/XICH_{-1} - 1.) - .359 \text{ (NMICH/NMICH}_{-1} - 1.) \\ (0.077)$$

$$= 0.19157 \left(\frac{XICH - KICHW}{XICH_{-1} - KICHW_{-1}} - 1. \right) \\ (4.45)$$

$$+ 0.08902 \text{ (KICHW/KICHW}_{-1} - 1.) + 0.04736 \text{ (1.-QSH65)} \\ (3.51) \quad (5.78)$$

$$R^2 = -0.194 \quad S.E. = 0.022 \quad D.W. = 2.37 \\ \text{Sample Period 1959-1974} \quad \text{Fit} = .9984$$

(b) Material Inputs

$$(XICH/XICH_{-1} - 1.) - .359 \text{ (.399) (NMICH/NMICH}_{-1} - 1.) \\ (0.091)$$

$$= 0.21184 \left(\frac{XICH - KICHW}{XICH_{-1} - KICHW_{-1}} - 1. \right) \\ (2.22)$$

$$+ 0.09884 \text{ (KICHW/KICHW}_{-1} - 1.) \\ (2.52)$$

$$+ 0.12845 \text{ (UCH/UCH}_{-1} - 1.) + 0.04166 \text{ (1.-QSH65)} \\ (0.67) \quad (3.66)$$

(b) Material Inputs (con't.)

$$R^2 = 0.061$$
$$S.E. = 0.026$$
$$D.W. = 2.51$$

Sample Period 1960-1972

Fit = .9973

(X.13) XIMB Branch Output: Machine Building and Metal Working

(a) Primary Factors

$$(XIMB/XIMB_{-1}^{-1.}) = 1.14460 \quad (NMIMB/NMIMB_{-1}^{-1.})$$

(8.79)

(0.079)

$$+ 0.09865 \left(\frac{KIMB - KIMBM}{KIMB_{-1} - KIMBM_{-1}} - 1. \right)$$

$$+ 0.20557 \text{ (KIMBM/KIMBM}_{-1}^{-1}) - 0.04838 \text{ Q6365}$$

$$(4.24) \quad (9.67)$$

+ 0.02026 QSH72
(3.88)

$$R^2 = 0.889$$
$$S.E. = 0.007$$
$$D.W. = 2.82$$

Sample Period 1959-1974

Fit = 0.9999

(b) Material Inputs

$$\begin{aligned} & (XIMB/XIMB_{-1}-1.) - 0.200 \quad (UMB/UMB_{-1}-1.) \\ & \quad (0.055) \end{aligned}$$

$$= 0.71779 \text{ (NMIMB/NMIMB}_{-1}^{-1}.)$$

(3.23)

$$+ 0.11254 \left(\frac{KIMB - KIMBM}{KIMB_{-1} - KIMBM_{-1}} - 1. \right)$$

$$+ 0.16577 \text{ (KIMBM/KIMBM}_{-1}^{-1}.) - 0.03822 \text{ Q6365}$$

$$(1.85) \quad (4.35)$$

$$R^2 = 0.607$$
$$S.E. = 0.011$$
$$D.W. = 1.76$$

Sample Period 1960-1972

Fit = 0.9986

(X.14) XIFP Branch Output: Forest Products(a) Primary Factors

$$(XIFP/XIFP_{-1}^{-1.}) - .02 = 0.48620 \text{ (NMIFP/NMIFP}_{-1}^{-1.}) \\ (.011) \quad (0.99)$$

$$+ 0.23734 \text{ (KIFP/KIFP}_{-1}^{-1.}) - 0.02825 \text{ Q6566} \\ (5.64) \quad (3.17) \\ - 0.04533 \text{ Q6061} \\ (4.28)$$

$$R^2 = .684 \quad S.E. = 0.012 \quad D.W. = 2.21 \\ \text{Sample Period 1960-1974} \quad \text{Fit} = 0.9956$$

(b) Material Inputs

$$(XIFP/XIFP_{-1}^{-1.}) = 0.44927 \text{ [.553 (UFP/UFP}_{-1}^{-1.})} \\ (2.30) \\ (0.031)$$

$$+ .447 \text{ (.63) (NMIFP/NMIFP}_{-1}^{-1.})] \\ + 0.34219 \text{ (KIFP/KIFP}_{-1}^{-1.}) - 0.02855 \text{ Q6566} \\ (4.48) \quad (2.61) \\ - 0.04670 \text{ Q6061} \\ (4.06)$$

$$R^2 = .612 \quad S.E. = 0.014 \quad D.W. = 1.65 \\ \text{Sample Period 1960-1972} \quad \text{Fit} = .9907$$

(X.15) XIPA Branch Output: Paper and Pulp(a) Primary Factors

$$(XIPA/XIPA_{-1}^{-1.}) - 0.02 = 0.32433 \text{ (NMIPA/NMIPA}_{-1}^{-1.}) \\ (1.21) \\ (0.045)$$

$$+ 0.28065 \text{ (KIFP/KIFP}_{-1}^{-1.}) + 0.04916 \text{ Q6566} \\ (2.55) \quad (2.63) \\ + 0.01071 \text{ QSH68} \\ (1.29)$$

$$R^2 = .574 \quad S.E. = 0.017 \quad D.W. = 2.88 \\ \text{Sample Period 1959-1974} \quad \text{Fit} = 0.9979$$

(b) Material Inputs

$$\begin{aligned} (XIPA/XIPA_{-1}-1.) &= 0.16648 \text{ (NMIPA/NMIPA}_{-1}-1.) \\ &\quad (0.77) \\ &\quad (0.069) \end{aligned}$$

$$+ 0.39275 \text{ (KIFP/KIFP}_{-1}-1.) \\ (4.32)$$

$$+ 0.31019 \text{ (UPA/UPA}_{-1}-1.) + 0.04943 \text{ Q6566} \\ (4.88) \quad (3.25)$$

$$\begin{aligned} R^2 &= 0.760 & \text{S.E.} &= 0.014 & \text{D.W.} &= 2.80 \\ \text{Sample Period } 1960-1972 & & & & \text{Fit} &= 0.9987 \end{aligned}$$

(X.16) XICM Branch Output: Construction Materials(a) Primary Factors

$$\begin{aligned} (XICM/XICM_{-1}-1.) &- 0.59 \text{ (NMICM/NMICM}_{-1}-1.) = \\ &\quad (0.059) \end{aligned}$$

$$+ 0.17619 \text{ (KICM/KICM}_{-1}-1.) + 0.05121 \\ (3.03) \quad (5.13)$$

$$- 0.01853 \text{ QFYP} - 0.04105 \text{ Q6869} \\ (2.06) \quad (2.95)$$

$$\begin{aligned} R^2 &= 0.732 & \text{S.E.} &= 0.018 & \text{D.W.} &= 1.30 \\ \text{Sample Period } 1959-1974 & & & & \text{Fit} &= .9975 \end{aligned}$$

(b) Material Inputs

$$\begin{aligned} (XICM/XICM_{-1}-1.) &- 0.59 \text{ (.482) (NMICM/NMICM}_{-1}-1.) \\ &\quad (0.064) \end{aligned}$$

$$= 0.20626 \text{ (KICM/KICM}_{-1}-1.) \\ (1.53)$$

$$+ 0.17136 \text{ (UCM/UCM}_{-1}-1.) + 0.02966 \\ (1.15) \quad (1.39)$$

$$\begin{aligned} R^2 &= 0.233 & \text{S.E.} &= 0.029 & \text{D.W.} &= 1.26 \\ \text{Sample Period } 1960-1972 & & & & \text{Fit} &= \end{aligned}$$

(X.17) XISG Branch Output: Softgoods(a) Primary Factors

$$\begin{aligned}
 \ln XISG = & - 4.73048 + 0.92123 \ln NMISG \\
 (4.356) & \quad (2.97) \quad (4.60) \\
 & + 0.21945 \ln KISG + 0.22810 \ln XAGT70_{-1} \\
 & \quad (4.11) \quad (3.12) \\
 & - 0.08337 Q6567 \\
 & \quad (7.47)
 \end{aligned}$$

$$\begin{aligned}
 R^2 &= 0.996 & S.E. &= 0.017 & D.W. &= 2.00 \\
 \text{Sample Period } &1958-1974 & & & \text{Fit} &= 0.996
 \end{aligned}$$

(b) Material Inputs

$$\begin{aligned}
 \ln XISG = & - 8.31346 + 1.43480 \ln NMISG + 0.03341 \ln KISG \\
 (4.335) & \quad (2.37) \quad (3.36) \quad (0.19) \\
 & + 0.16128 \ln USG - 0.06931 Q6567 \\
 & \quad (1.14) \quad (3.49)
 \end{aligned}$$

$$\begin{aligned}
 R^2 &= 0.991 & S.E. &= 0.024 & D.W. &= 1.24 \\
 \text{Sample Period } &1959-1972 & & & \text{Fit} &= 0.992
 \end{aligned}$$

(X.18) XIPF Branch Output: Processed Foods(a) Primary Factors

$$\begin{aligned}
 (XIPF/XIPF_{-1}^{-1}) - 0.01 = & 0.63866 (NMIPF/NMIPF_{-1}^{-1}) \\
 (0.045) & \quad (1.91) \\
 & + 0.10178 (KIPF/KIPF_{-1}^{-1}) + 0.02025 \left(\frac{XAGT70}{XAGTN} \right)_{-1} \\
 & \quad (0.91) \quad (1.67)
 \end{aligned}$$

$$\begin{aligned}
 R^2 &= 0.304 & S.E. &= 0.022 & D.W. &= 3.00 \\
 \text{Sample Period } &1959-1974 & & & &
 \end{aligned}$$

(b) Material Inputs

$$(XIPF/XIPF_{-1}^{-1.}) = 0.86264 \quad (NMIPF/NMIPF_{-1}^{-1.})$$

(2.74)

(0.054)

$$+ 0.12126 \quad (KIPF/KIPF_{-1}^{-1.})$$

(1.23)

$$+ 0.17662 \quad (UPF/UPF_{-1}^{-1.})$$

(2.76)

$$R^2 = 0.379$$

$$S.E. = 0.021$$

$$D.W. = 1.84$$

Sample Period 1960-1972

$$Fit = 0.995$$

(X.19) XIT Industrial Output(a) Aggregation Identity

$$\begin{aligned} XIT \equiv & 0.062 \, XIEP + 0.060 \, XICP + 0.056 \, XIPP + 0.073 \, XIFM \\ & + 0.038 \, XINF + 0.067 \, XICM + 0.062 \, XICH + 0.315 \, XIMB \\ & + 0.069 \, XIFP + 0.011 \, XIPA + 0.099 \, XISG + 0.090 \, XIPF \end{aligned}$$

(b) Aggregate Production Function, No Foreign Capital Term

$$\begin{aligned}
 (\text{XIT}/\text{XIT}_{-1}^{-1.}) &= 0.33664 \quad (0.845 \quad \frac{\text{NMI}}{\text{NMI}_{-1}} + 0.155 \quad \frac{\text{NIET}}{\text{NIET}_{-1}}^{-1.}) \\
 (0.065) & \quad (3.24) \\
 &+ 0.57337 \quad (\text{KIA}/\text{KIA}_{-1}^{-1.}) \\
 & \quad (15.46) \\
 &+ 0.09348 \quad (\frac{\text{XAGT70}}{\text{XAGTN}} + \frac{\text{XAGT70}_{-1}}{\text{XAGTN}_{-1}} - 2.) \\
 & \quad (7.27)
 \end{aligned}$$

$$R^2 = 0.709$$

$$\text{S.E.} = 0.005$$

$$\text{D.W.} = 2.32$$

Sample Period 1960-1974

$$\text{Fit} = 0.9997$$

(c) Aggregate Production Function, Capital Disaggregation

$$\begin{aligned}
 \ln \text{XIT} &- 0.37 \quad (0.845 \quad \ln (\text{NMI}-\text{NIET}) + .155 \quad \ln \text{NIET}) = \\
 & \quad (0.781) \\
 &- 1.44177 + 0.41735 \quad \ln (\text{KIA}-\text{KIW}) + 0.11497 \quad \ln \text{KIW} \\
 & \quad (3.11) \quad (3.62) \quad (1.06) \\
 &- 0.03522 \quad \text{Q6466} + 0.07159 \quad (\frac{\text{XAGT70}}{\text{XAGTN}} - 1.) \\
 & \quad (3.66) \quad (0.98)
 \end{aligned}$$

$$R^2 = 0.997$$

$$\text{S.E.} = 0.014$$

$$\text{D.W.} = 0.58$$

Sample Period 1960-1974

$$\text{Fit} = 0.9974$$

(X.20) XCRUB Construction Activity, State Enterprises

$$\begin{aligned}
 \ln \text{XCRUB} &= - 7.37635 + 1.08493 \quad \ln \text{NMC} + 0.06917 \quad \ln \left(\frac{\text{KCR}_{-1} + \text{KCR}}{2.} \right) \\
 (3.506) & \quad (8.09) \quad (9.66) \quad (1.57) \\
 &+ 0.23345 \quad \ln \text{XICM} - 0.01867 \quad \text{QFIN} \\
 & \quad (5.74) \quad (2.43)
 \end{aligned}$$

$$R^2 = 0.999$$

$$\text{S.E.} = 0.009$$

$$\text{D.W.} = 2.45$$

Sample Period 1958-1974

(X.21) XT7R Transport and Communications Output Index

$$\begin{aligned} \ln XT7R = & - 3.30713 + 0.74248 \ln \left(\frac{KTA_{+1} + KTA}{2} \right) \\ (4.29) & \quad (3.82) \quad (5.13) \\ & + 0.15759 \ln \left(\frac{NTSPA + NTSPA_{-1}}{2} \right) + 0.62861 \ln KTCUS \\ & \quad (1.28) \quad (3.87) \end{aligned}$$

$$R^2 = 0.999 \quad S.E. = 0.012 \quad D.W. = 1.07$$

Sample Period 1958-1974

(X.22) XDTR Domestic Trade

$$\begin{aligned} \ln XDTR = & - 3.25146 + 0.29108 \ln NMS \\ (4.408) & \quad (1.52) \quad (0.69) \\ & + 1.15236 \ln \left[\frac{0.27291(XISG+XISG_{-1}) + 0.39034(XIPF+XIPF_{-1})}{2 \cdot (0.27291+0.39034)} \right] \\ & \quad (3.20) \end{aligned}$$

$$R^2 = 0.998 \quad S.E. = 0.015 \quad D.W. = 0.81$$

Sample Period 1961-1974

(X.23) XSER70 Services

$$\begin{aligned} \ln XSER70 = & - 4.71028 + 0.98524 [0.8752 \ln NMG \\ (4.461) & \quad (84.72) \quad (165.) \\ & + 0.1248 \ln \left(\frac{KSER_{+1} + KSER + KHBF_{+1} + KHBF}{2} \right)] \end{aligned}$$

$$R^2 = 0.9995 \quad S.E. = 0.005 \quad D.W. = 0.37$$

Sample Period 1960-1974

W. WAGES(W.1) WI* Average Wage, Industry

$$\text{DVWI} - \text{DVWI}_{-1} = 0.20052 (28.3776 - \text{DVWI}_{-1}) + 0.02466$$

(0.063) (2.59) (0.33)

$$+ 1.68906 (\text{QWREF} - 2 * .0625)$$

(6.55)

$$+ 0.87915 (\text{Q61} - .0625)$$

(2.94)

$$R^2 = 0.845 \quad \text{S.E.} = 0.281 \quad \text{D.W.} = 1.24$$

Sample Period 1960-1973

Where

$$\text{DVWI} = \frac{\text{WI}^* / \text{PRC}_{-1}}{171.449 \text{ XIT} / \text{NMI}} \quad \frac{(\text{real wage})}{(\text{average product})}$$

(W.2) WAS* Average Wage, State Farms

$$\text{DVWA} - \text{DVWA}_{-1} = 0.41095 (\text{DHWA} - \text{DVWA}_{-1}) + 0.45859$$

(0.779) (3.12) (0.93)

$$R^2 = 0.411 \quad \text{S.E.} = 1.930 \quad \text{D.W.} = 1.77$$

Sample Period 1959-1974

Where

$$\text{DVWA} = \frac{10 \cdot \text{WAS}^* / \text{PRC}_{-1}}{(\text{XAGTN}_{-1} / \text{NAT}_{-1})} \quad \frac{(\text{real wage})}{(\text{average product})}$$

and

$$\text{DHWA} = 61.11470 + 1.75075 (1 - \text{QSH68}) (\text{QT50} - 19.)$$

(56.191) (60.57) (7.32)

$$R^2 = 0.793 \quad \text{S.E.} = 3.009 \quad \text{D.W.} = 0.68$$

Sample Period 1959-1974

(W.3) WAK* Average Wage, Collective Farms

$$\begin{array}{rcl} \text{DVWA} - \text{DVWA}_{-1} & = & 0.84175 (\text{DHWA} - \text{DVWA}_{-1}) + 0.24676 \\ (1.559) & & (5.22) \quad (0.45) \end{array}$$

$$\begin{array}{lll} R^2 = 0.661 & \text{S.E.} = 1.923 & \text{D.W.} = 2.48 \\ \text{Sample Period 1959-1974} & & \end{array}$$

Where

$$\text{DVWA} = \frac{10. \text{WAK}^* / \text{PRC}_{-1}}{(\text{XAGT70}_{-1} / \text{NAT}_{-1})} \quad \frac{(\text{real wage})}{(\text{average product})_{-1}}$$

and

$$\begin{array}{rcl} \text{DHWA} & = & 41.67122 + 3.18046 (1. - \text{QSH68}) (\text{QT50-19.}) \\ (32.73) & (62.50) & (20.13) \end{array}$$

$$\begin{array}{lll} R^2 = 0.967 & \text{S.E.} = 1.989 & \text{D.W.} = 2.01 \\ \text{Sample Period 1959-1974} & & \end{array}$$

(W.4) WC* Average Wage, Construction

$$\begin{array}{rcl} \frac{\text{WC}^*}{\text{WI}^*} & = & 1.10835 + 0.01052 (\text{QT50-20.}) (1. - \text{Q690N}) \\ & & (234.98) \quad (12.17) \\ (1.0675) & & \end{array}$$

$$\begin{array}{lll} R^2 = 0.908 & \text{S.E.} = 0.014 & \text{D.W.} = 1.55 \\ \text{Sample Period 1958-1974} & & \end{array}$$

(W.5) WTC* Average Wage, Transport and Communications

$$\begin{array}{rcl} \frac{\text{WTC}^*}{\text{WI}^*} & = & 1.00722 \left(\frac{\text{WTC}^*}{\text{WI}^*} \right)_{-1} + 0.02539 (\text{Q6162} - 2. * .0625) \\ & & (516.04) \quad (4.42) \\ (0.981) & & \end{array}$$

$$\begin{array}{lll} R^2 = 0.941 & \text{S.E.} = 0.008 & \text{D.W.} = 1.71 \\ \text{Sample Period 1959-1974} & & \text{D.} = 0.58 \end{array}$$

(W.6) WS* Average Wage, Trade and Distribution

$$\frac{WS^*}{WGS^*} = \frac{1.00315}{(387.15)} \left(\frac{WS^*}{WGS^*} \right)^{-1} + \frac{0.02056}{(3.63)} (Q6668 - 3.*.0625)$$

(0.855)

$$R^2 = 0.893 \quad S.E. = 0.009$$

Sample Period 1959-1974

$$D.W. = 1.59$$

$$D. = 0.82$$

(W.7) WGS* Average Wage, Government and Services

$$\frac{WGS^*}{WI^*} = \frac{0.98983}{(259.03)} \left(\frac{WGS^*}{WI^*} \right)^{-1} + \frac{0.09364}{(7.56)} Q65$$

(0.978)

$$R^2 = 0.889 \quad S.E. = 0.012$$

Sample Period 1959-1974

$$D.W. = 1.63$$

$$D. = 0.74$$

Supplemental Wage Equations

These equations determine the monthly money wage variables which are used in the Hickman-Lau functions. Sample Period 1959-1972 for Equations (W.8)-(W.24).

(W.8) WAGI* Industry

$$\frac{WAGI^*}{WI^*} = 0.1004$$

(1166.)

(0.1000)

$$R^2 = 0.225$$

$$S.E. = 0.0003$$

$$D.W. = 0.88$$

(W.9) WAGA* Agriculture

$$\frac{WAGA^*}{WAS^*} = 0.08355$$

(545.)

(0.0835)

$$R^2 = -0.009$$

$$S.E. = 0.0006$$

$$D.W. = 2.26$$

(W.10) WAGCON* Construction

$$\frac{WAGCON^*}{WC^*} = 0.08329 + 0.001856 \text{ QSH65}$$

(318.) (4.64)

(0.0841)

$$R^2 = 0.644$$

$$S.E. = 0.0007$$

$$D.W. = 2.02$$

(W.11) WAGTC* Transport and Communications

$$\frac{WAGTC^*}{WTC^*} = 0.083255$$

(434.)

(0.0833)

$$R^2 = 0.031$$

$$S.E. = .0007$$

$$D.W. = 1.08$$

(W.12) WAGTD* Domestic Trade

$$\frac{WAGTD^*}{WS^*} = 0.08334 - 0.000388 QSH68$$

$$(1446.) \quad (4.40)$$

$$(0.0832)$$

$$R^2 = 0.643$$

$$S.E. = .0002$$

$$D.W. = 1.79$$

(W.13) WAGE* Economy Average

$$\frac{WAGE^*}{WI^*} = .07675 + .03217 Q69 - 0.0030 QSH65$$

$$(4.34.) \quad (64.3) \quad (11.5)$$

$$(.0778)$$

$$R^2 = 0.998$$

$$S.E. = .0005$$

$$D.W. = .714$$

BRANCH WAGES (W.14) - (W.24)

Define API - Average Industrial Productivity

$$API = XIT/NMI$$

Define TR - Time Trend 1950 = -18 1968 on = 0

$$TR = (1-QSH68) * (QT50-19.)$$

Define TSH - Shift Variable 1 to 1967 1968 on = 0

$$TSH = 1.-QSH68$$

(W.14) WAGFM* Ferrous Metallurgy

$$\frac{WAGFM^*}{WAGI^*} = .05544 + .04718 (XIFM/NMIFM)/API - .02117 TR$$

$$(.208) \quad (4.15) \quad (9.6)$$

$$(1.2055)$$

$$R^2 = .951$$

$$S.E. = .0108$$

$$D.W. = 2.20$$

(W.15) WAGCP* Coal Products

$$\frac{WAGCP^*}{WAGI^*} = 1.7903 - .11490 TSH - .00469 TR$$

$$(81.9) \quad (4.48) \quad (1.21)$$

$$R^2 = .864$$

$$S.E. = .0301$$

$$D.W. = 1.74$$

(W.16) WAGPG* Petroleum & Gas

$$\frac{WAGPG^*}{WAGI^*} = 1.0279 - .00898 \text{ TR}$$

(951) (37.5)

(1.0568)

$$R^2 = .992$$

$$S.E. = .0028$$

$$D.W. = 1.27$$

(W.17) WAGEP* Electric Power

$$\frac{WAGEP^*}{WAGI^*} = 1.0295 - .00373 \text{ TR} - .08779 \text{ Q5960}$$

(380) (4.72) (12.3)

(1.0290)

$$R^2 = .941$$

$$S.E. = .0069$$

$$D.W. = 1.34$$

(W.18) WAGMB* Machine Building & Metal Working

$$\frac{WAGMB^*}{WAGI^*} = .47923 + .19898 (\text{XIMB/NMIMB})/\text{API} + .00441 \text{ TR}$$

(5.45) (6.01) (3.76)

(1.0132)

$$R^2 = .82$$

$$S.E. = .0061$$

$$D.W. = 1.11$$

(W.19) WAGCH* Chemicals

$$\frac{WAGCH^*}{WAGI^*} = 1.0293 - .00271 \text{ TR}$$

(246) (2.92)

(1.0380)

$$R^2 = .417$$

$$S.E. = .0110$$

$$D.W. = 1.72$$

(W.20) WAGFP* Forest Products

$$\frac{WAGFP^*}{WAGI^*} = .69099 + .02636 (\text{XIFP/NMIFP})/\text{API} + .00996 \text{ TR}$$

(4.10) (1.89) (10.2)

(.9805)

$$R^2 = .906$$

$$S.E. = .1089$$

$$D.W. = 1.40$$

(W.21) WAGP* Paper

$$\frac{WAGP^*}{WAGI^*} = .97465 - .00621 \text{ TR}$$

(156) (4.50)

(.9946)

$$R^2 = .629$$

$$S.E. = .0164$$

$$D.W. = 1.22$$

(W.22) WAGCM* Construction Materials

$$\frac{WAGCM^*}{WAGI^*} = .85587 + .00696 (XICM/NMICM)/API + .00181 \text{ TR} + .06498 \text{ Q7072}$$

(9.97) (1.34) (1.14) (9.11)

(.9718)

$$R^2 = .966$$

$$S.E. = .0072$$

$$D.W. = 1.30$$

(W.23) WAGSG* Soft Goods

$$\frac{WAGSG^*}{WAGI^*} = .60873 + .02719 (XISG/NMISG)/API + .00495 \text{ TR} - .03348 \text{ Q5960}$$

(.7598) (8.75) (2.40) (5.08) (4.48)

$$R^2 = .924$$

$$S.E. = .0070$$

$$D.W. = .823$$

(W.24) WAGPF* Processed Foods

$$\frac{WAGPF^*}{WAGI^*} = .88688 + .00699 \text{ TR} - .03112 \text{ Q5960}$$

(.86) (306) (8.27) (4.07)

$$R^2 = .957$$

$$S.E. = .0073$$

$$D.W. = 1.91$$

Z. INCOMES(Z.1) ZGW* Gross Earnings, State Employees

$$ZGW^* = 1.02077 ZWH^* \\ (102.18) \quad (621.13)$$

$$R^2 = 1.000 \quad S.E. = 0.72 \quad D.W. = 0.38 \\ \text{Sample Period 1958-1972}$$

$$\text{Where: } ZWH^* \equiv (NMI \cdot WI^* + NMC \cdot WC^* + NMTC \cdot WTC^* \\ + NMS \cdot WS^* + NMG \cdot WGS^* + 1000 \cdot NASOV \cdot WAS^*) / 10.^6$$

(Z.2) ZWK* Collective Farm Wage Payments

$$ZWK^* \equiv NAKOL \cdot WAK^*$$

(Z.3) ZSAG* Income from Sale of Farm Products

$$\ln ZSAG^* = - 4.24559 + 0.71561 (\ln PAFC70 + \ln XAGT70) \\ (1.968) \quad (8.39) \quad (12.30)$$

$$- 1.27292 \left(\frac{XAGT70}{XAGTN} - 1 \right) - 0.18380 Q69 \\ (4.59) \quad (2.85)$$

$$R^2 = .922 \quad S.E. = 0.061 \quad D.W. = 1.97 \\ \text{Sample Period 1958-1974}$$

(Z.4) ZMPA* Military Pay and Allowances

$$ZMPA^* \equiv NMD9 \cdot WDF^*$$

(Z.5) ZTG* Gross Household Money Income

$$ZTG^* \equiv ZGW^* + ZWK^* + ZSAG^* + ZMPA^* + BTRAN^* + ZPCP^*9$$

(Z.6) ZTD* Disposable Household Money Income

$$ZTD^* \equiv ZTG^* - TAXES^* - TDUES^*9 - TINSP^*9$$

(Z.7) ZIK60 Agricultural Income in Kind

$$100. \frac{ZIK60}{XAGTN} = 18.81209 + 24.31700 \left(\frac{XAGT70}{XAGTN} - 1. \right) \\ (18.12) \quad (55.17) \quad (4.88)$$

$$R^2 = 0.725 \quad S.E. = 1.03 \quad D.W. = 2.12 \\ \text{Sample Period 1956-1966}$$

(Z.8) ZD70 Real Disposable Household Income

$$ZD70 = 100. ZTD^*/PRC + ZIK60/0.76$$

(Z.9) Gross Profits, National Economy(a) Non-Residual Version

$$ZPG^*/ZPG^*_{-1} = 1.05012 + 0.16708 Q6668 + 0.12411 Q70 \\ (1.110) \quad (67.40) \quad (6.16) \quad (2.87) \\ + 0.32122 \left(\frac{XAGT70}{XAGTN} - 1. \right) + 0.06636 QSH65 \\ (1.65) \quad (2.64)$$

$$R^2 = 0.817 \quad S.E. = 0.038 \quad D.W. = 3.01 \\ \text{Sample Period 1959-1974}$$

(b) Residual Version

$$ZPG^* = 0.9363 GNP3.PGNP3 - ZD70.PRC/100. - ZDT^* \\ - TOSS^* - TPOP^*$$

(Z.10) Amoritization Funds, National Economy

$$ZDT^*/ZDT^*_{-1} = 0.53466 + 0.52239 KSUM/KSUM_{-1} \\ (1.119) \quad (1.88) \quad (2.00)$$

$$+ 0.26786 Q63 + 0.01935 (QSH67 - QSH67_{-1}) \\ (33.79) \quad (1.59)$$

$$R^2 = 0.994 \quad S.E. = 0.007 \quad D.W. = 1.32 \\ \text{Sample Period 1959-1974}$$

P. PRICES(P.1) PNF70 State Retail Price, Non-Food Goods

$$\frac{PNF70}{1+RTTD9} - \left(\frac{PNF70}{1+RTTD9} \right)_{-1} = -0.10904 + 1.56521 Q6668$$

(0.48) (2.45)

(0.287)

$$+ 0.30613 (PWIQN - \left(\frac{PNF70}{1+RTTD9} \right)_{-1})$$

(1.48)

$$R^2 = 0.683$$

$$S.E. = 0.727$$

$$D.W. = 1.39$$

Sample Period 1960-1973

Where

PWIQN \equiv K.WIQN (marked-up industrial wage)

$$WIQN = \frac{WI^*}{17144.9 \text{ XIT/NMI}}$$

$$K = 2.78220 + 0.25912 QLT28 - 0.14517 QSH68$$

(4.77) (1.59) (3.91)

Estimated over sample period 1959-1973

(P.2) PIRF70 State Retail Price, Food Goods

$$\frac{PIRF70}{1+RTTD9} - \left(\frac{PIRF70}{1+RTTD9} \right)_{-1} = 0.72739 + 1.72614 Q6668$$

(1.087) (3.01) (3.29)

$$+ 0.25991 (.85 PWIQN + .15 PAFC70_{-1})$$

(2.87)

$$- \left(\frac{PIRF70}{1+RTTD9} \right)_{-1}$$

$$R^2 = 0.610$$

$$S.E. = 0.800$$

$$D.W. = 2.41$$

Sample Period 1960-1973

(P.3) PAFC70 "Negotiated" Agricultural Price

(Food sold by collective farms to consumer cooperatives.)

$$\begin{aligned}
 \text{PAFC70/PAFC70}_{-1} = & 1.05715 + .09017 Q69 - 0.1527 \frac{\text{MGRDWS}}{\text{PGR9}} \\
 & (46.27) \quad (1.82) \quad (1.85) \\
 & - 0.45472 \left(\frac{\text{XAGT70}_{-1}}{\text{XAGTN}_{-1}} - 1. \right) \\
 & (2.21)
 \end{aligned}$$

$$\begin{aligned}
 R^2 &= 0.521 & \text{S.E.} &= 0.045 & \text{D.W.} &= 2.26 \\
 \text{Sample Period} &1961-1974
 \end{aligned}$$

(P.4) PFCC Consumption Price, Food

$$\text{PFCC} \equiv .875 \text{PIRF70} + .125 \text{PAFC70}$$

(P.5) PRC Consumption Price, Total

$$\text{PRC} \equiv .60 \text{PFCC} + .40 \text{PNF70}$$

(P.6) PIWL70 Wholesale Price, Light Industry

$$\begin{aligned}
 \text{PIWL70} - \text{PIWL70}_{-1} = & - 0.23590 - 1.82417 Q67 + 2.95478 Q73 \\
 & (0.74) \quad (2.19) \quad (3.55) \\
 & (0.162) \\
 & + .09382 (\text{PWIQN} - \text{PIWL70}_{-1}) \\
 & (1.38)
 \end{aligned}$$

$$\begin{aligned}
 R^2 &= .676 & \text{S.E.} &= .798 & \text{D.W.} &= 2.06 \\
 \text{Sample Period} &1960-1973
 \end{aligned}$$

(P.7) PIWH70 Wholesale Price, Heavy Industry

$$\begin{aligned}
 \text{PIWH70} - \text{PIWH70}_{-1} = & - 0.56813 - 3.97732 Q61 + 14.20453 Q67 \\
 & (1.57) \quad (3.04) \quad (10.86) \\
 & (0.162)
 \end{aligned}$$

$$\begin{aligned}
 R^2 &= .924 & \text{S.E.} &= 1.256 & \text{D.W.} &= 1.22 \\
 \text{Sample Period} &1960-1973
 \end{aligned}$$

(P.8) PII Investment Deflator, Industry

$$\text{PII} = 0.81500 \text{ PXCON9} + 0.20588 \text{ PIWH70}$$

(87.9) (13.42) (3.73)

$$R^2 = .934 \quad \text{S.E.} = 1.62 \quad \text{D.W.} = 0.36$$

Sample Period 1957-1972

(P.9) PIC Investment Deflator, Construction

$$\text{PIC} = 0.32125 \text{ PXCON9} + 0.68619 \text{ PIWH70}$$

(91.1) (2.40) (5.64)

$$R^2 = .727 \quad \text{S.E.} = 3.56 \quad \text{D.W.} = 2.13$$

Sample Period 1957-1972

(P.10) PIT Investment Deflator, Transport and Communications

$$\text{PIT} = 0.67878 \text{ PXCON9} + 0.32086 \text{ PIWH70}$$

(87.0) (4.10) (2.13)

$$R^2 = .699 \quad \text{S.E.} = 4.40 \quad \text{D.W.} = 0.34$$

Sample Period 1957-1972

(P.11) PIS Investment Deflator, Government, Trade, Services, etc.
(excl. Housing)

$$\text{PIS} = 0.78015 \text{ PXCON9} + 0.24469 \text{ PIWH70}$$

(88.6) (11.04) (3.81)

$$R^2 = .899 \quad \text{S.E.} = 1.88 \quad \text{D.W.} = 0.36$$

Sample Period 1957-1972

(P.12) PIHS Investment Deflator, Housing

$$\text{PIHS} = 0.82329 \text{ PXCON9} + 0.19220 \text{ PIWH70}$$

(87.3) (19.76) (5.08)

$$R^2 = .971 \quad \text{S.E.} = 1.11 \quad \text{D.W.} = 0.53$$

Sample Period 1957-1972

(P.13) PIA Investment Deflator, Agriculture

$$\text{PIA} = 0.34481 \text{ PXCON9} + 0.06897 \text{ PIWH70} + 58.03934$$

$$(93.5) \quad (22.19) \quad (3.00) \quad (30.86)$$

$$R^2 = .983 \quad \text{S.E.} = 0.410 \quad \text{D.W.} = 1.16$$

Sample Period 1957-1972

(P.14) PGNP3 GNP Deflator

$$\text{PGNP3} = 0.77346 + 0.01086 \text{ QT50} - 0.13101 \text{ QPR67}$$

$$(0.881) \quad (23.66) \quad (7.58) \quad (8.68)$$

$$R^2 = 0.989 \quad \text{S.E.} = 0.013 \quad \text{D.W.} = 1.70$$

Sample Period 1958-1974

Actual PGNP defined by the identity:

$$\text{PGNP} = \text{GNP}^{-1} \left(\text{ZD70} \cdot \frac{\text{PRC}}{100} + \text{ZPG}^* + \text{ZDT}^* + \text{TOSS}^* + \text{TPOP}^* \right) / .9363$$

C. CONSUMPTION(C.1) CR70 Total Consumption(C.1a) Identity Determination

$$CR70 \equiv CRF70 + CRND70 + CRD70 + CRS70$$

(C.1b) Direct Determination

$$\begin{aligned} \frac{CR70}{ZD70} &= 1.14566 - 0.60556 \frac{ZD70}{ZD70} \quad (QLT28-3.8067) \quad QSH72_{-1} \\ &\quad (5.76) \quad (12.25) \\ &\quad (1.279) \\ &\quad - 0.39815 \frac{ZD70}{ZD70}_{-1} + 1.20099 \left(\frac{.27291 \text{ XISG} + .39034 \text{ XIPF}}{ZD70} \right) \\ &\quad (3.09) \quad (4.44) \end{aligned}$$

$$R^2 = 0.986 \quad S.E. = 0.015 \quad D.W. = 1.84$$

Sample Period 1956-1974

(C.1c) Residual Determination

$$CR70 \equiv GNP3 - GEUSUM3 - .001 (ETW70-MTW70) - GRESEM3$$

(C.2) CRF70 Food Consumption(C.2a) Direct Determination

$$\begin{aligned} \frac{CRF70}{ZD70} &= 1.56793 - 0.33992 \frac{ZD70}{ZD70}_{-1} - 0.95585 \frac{PFCC}{PNF70} \\ &\quad (5.45) \quad (3.34) \quad (4.24) \\ &\quad (0.706) \\ &\quad + 0.30920 \frac{XAGT70}{ZD70} + 1.13451 \frac{0.39034 \text{ XIPF}}{ZD70} \\ &\quad (2.28) \quad (4.24) \end{aligned}$$

(C.2a) Direct Determination (Continued)

$$R^2 = 0.987 \quad S.E. = 0.013 \quad D.W. = 1.37$$

Sample Period 1956-1974

(C.2b) Share Determination

$$\begin{aligned} \frac{CRF70}{CR70} &= 0.74592 \left(\frac{CRF70}{CR70} \right)_{-1} + 0.33304 \left(\frac{CRND70}{CR70} \right)_{-1} \\ &\quad (4.78) \quad (0.93) \\ (0.547) \\ &+ 0.55263 \left(\frac{CRD70}{CR70} \right)_{-1} + 0.96972 \left(\frac{CRS70}{CR70} \right)_{-1} \\ &\quad (1.58) \quad (2.06) \\ &- 0.21494 \frac{PFCC}{PNF70} + 0.00443 \frac{1.71449XIT}{ZD70} \\ &\quad (1.51) \quad (0.08) \\ &+ 0.18438 \frac{100BDN*9/PIWH70}{ZD70} + 0.07783 \frac{XAGT70_{-1}}{ZD70} \\ &\quad (0.96) \quad (1.32) \end{aligned}$$

$$R^2 = 0.978 \quad S.E. = 0.005 \quad D.W. = 2.42$$

Sample Period 1957-1974 D. = 1.19

(C.2c) Share Determination, Non-Services

$$\begin{aligned} \frac{CRF70}{CRNS70} &= 1.03912 \left(\frac{CRF70}{CRNS70} \right)_{-1} + 0.65294 \left(\frac{CRND70}{CRNS70} \right)_{-1} \\ &\quad (7.38) \quad (1.38) \\ (0.671) \\ &+ 0.31635 \left(\frac{CRD70}{CRDS70} \right)_{-1} - 0.19691 \frac{PFCC}{PNF70} \\ &\quad (1.00) \quad (1.23) \\ &- 0.54820 \frac{0.27291XISG}{ZD70} + 0.05976 \frac{XAGT70}{ZD70} \\ &\quad (1.49) \quad (0.98) \\ &+ 0.44571 \frac{100.BDN*9/PIWH70}{ZD70} \\ &\quad (2.40) \end{aligned}$$

(C.2c) Share Determination, Non-Services (Continued)

$$R^2 = 0.978 \quad S.E. = 0.006 \quad D.W. = 2.24$$

$$\text{Sample Period } 1957-1974 \quad D. = 0.63$$

(C.3) CRND70 Softgoods(C.3a) Direct Determination

$$\frac{CRND70}{ZD70} = - \frac{0.04455}{(0.57)} + \frac{0.08357}{(1.68)} \frac{PFCC}{PNF70} + \frac{1.29545}{(6.02)} \frac{0.27291 \text{ XISG}}{ZD70}$$

$$(0.232)$$

$$R^2 = 0.854 \quad S.E. = 0.006 \quad D.W. = 1.38$$

$$\text{Sample Period } 1956-1974$$

(C.3b) Share Determination

$$\frac{CRND70}{CR70} = \frac{0.21046}{(2.16)} \left(\frac{CRF70}{CR70} \right)_{-1} + \frac{0.74858}{(3.37)} \left(\frac{CRND70}{CR70} \right)_{-1}$$

$$(0.184)$$

$$- \frac{0.25518}{(1.17)} \left(\frac{CRD70}{CR70} \right)_{-1} - \frac{0.50359}{(1.72)} \left(\frac{CRS70}{CR70} \right)_{-1}$$

$$+ \frac{0.13329}{(1.50)} \frac{PFCC}{PNF70} - \frac{0.06441}{(1.94)} \frac{1.71449 \text{ XIT}}{ZD70}$$

$$- \frac{0.03876}{(0.33)} \frac{100.BDN*9/PIWH70}{ZD70} - \frac{0.03929}{(1.07)} \frac{XAGT70_{-1}}{ZD70}$$

$$R^2 = 0.895 \quad S.E. = 0.003 \quad D.W. = 2.25$$

$$\text{Sample Period } 1957-1974 \quad D. = 1.59$$

(C.3c) Share Determination, Non-Services

$$\begin{aligned}
\frac{CRND70}{CRNS70} &= 0.00327 \left(\frac{CRF70}{CRNS70} \right)_{-1} + 0.38969 \left(\frac{CRND70}{CRNS70} \right)_{-1} \\
(0.225) & \quad (0.03) \quad (1.19) \\
&- 0.09038 \left(\frac{CRD70}{CRNS70} \right)_{-1} + 0.11796 \frac{PFCC}{PNF70} \\
& \quad (0.41) \quad (1.07) \\
&+ 0.42829 \frac{0.27291 \text{ XISG}}{ZD70} - 0.04094 \frac{XAGT70_{-1}}{ZD70} \\
& \quad (1.69) \quad (0.98) \\
&- 0.17759 \frac{100.BDN*9/PIWH70}{ZD70} \\
& \quad (1.38)
\end{aligned}$$

$$R^2 = 0.859 \quad S.E. = 0.004$$

Sample Period 1957-1974

$$D.W. = 1.90$$

$$D. = *$$

(C.4) CRD70 Durables(C.4a) Direct Determination

$$\begin{aligned}
\frac{CRD70}{ZD70} &= 1.55588 + 1.42781 \frac{QT50}{100.} - 0.48443 \text{ QLT28} \\
(0.105) & \quad (3.91) \quad (4.23) \quad (3.87) \\
&+ 0.51143 \frac{0.40624 \text{ XIMB}}{ZD70} - 0.11888 \frac{100.BDN*9/PIWH70}{ZD70} \\
& \quad (5.20) \quad (2.20)
\end{aligned}$$

$$R^2 = 0.975 \quad S.E. = 0.003$$

Sample Period 1957-1974

$$D.W. = 1.09$$

(C.4b) Share Determination

$$\begin{aligned}
\frac{CRD70}{CR70} = & 0.016681 \left(\frac{CRF70}{CR70} \right)_{-1} + 0.03548 \left(\frac{CRND70}{CR70} \right)_{-1} \\
& (0.18) \quad (0.17) \\
& (0.084) \\
& + 0.75690 \left(\frac{CRD70}{CR70} \right)_{-1} - 0.13078 \left(\frac{CRS70}{CR70} \right)_{-1} \\
& (3.68) \quad (0.47) \\
& + 0.060524 \frac{PFCC}{PNF70} + 0.001138 \frac{1.71449 \text{ XIT}}{ZD70} \\
& (0.72) \quad (0.04) \\
& - 0.23548 \frac{100 \text{ BDN}^*9/PIWH70}{ZD70} - 0.02052 \frac{XAGT70}{ZD70} \frac{1}{1} \\
& (2.10) \quad (0.59)
\end{aligned}$$

$$\begin{aligned}
R^2 &= 0.988 & S.E. &= 0.003 & D.W. &= 2.02 \\
\text{Sample Period } &1957-1974 & D. &= 0.09
\end{aligned}$$

(C.4c) Share Determination, Non-Services

$$\begin{aligned}
\frac{CRD70}{CRNS70} = & - 0.04239 \left(\frac{CRF70}{CRNS70} \right)_{-1} - 0.04267 \left(\frac{CRND70}{CRNS70} \right)_{-1} \\
& (0.51) \quad (0.15) \\
& (0.103) \\
& + 0.77406 \left(\frac{CRD70}{CRNS70} \right)_{-1} + 0.07896 \frac{PFCC}{PNF70} \\
& (4.13) \quad (0.83) \\
& + 0.11990 \frac{0.27291 \text{ XISG}}{ZD70} - 0.01881 \frac{XAGT70}{ZD70} \frac{-1}{1} \\
& (0.55) \quad (0.52) \\
& - 0.26811 \frac{100 \cdot \text{BDN}^*9/PIWH70}{ZD70} \\
& (2.44)
\end{aligned}$$

$$\begin{aligned}
R^2 &= 0.987 & S.E. &= 0.004 & D.W. &= 2.17 \\
\text{Sample Period } &1957-1974 & D. &= 0.59
\end{aligned}$$

(C.5) CRS70 Services(C.5a) Direct Determination

$$\frac{CRS70}{ZD70} = \frac{0.08595}{(1.58)} - \frac{0.17694}{(1.05)} \frac{QT50}{100} + \frac{0.04295}{(0.73)} (QLT28-3.8067) (1.-QSH68) \\ (0.237)$$

$$+ \frac{0.72225}{(7.36)} \frac{.43868 \text{ XSER70}}{ZD70}$$

$$R^2 = 0.973 \quad S.E. = 0.004 \quad D.W. = 1.13 \\ \text{Sample Period 1956-1974}$$

(C.5b) Share Determination

$$\frac{CRS70}{CR70} = \frac{.02695}{(0.48)} \left(\frac{CRF70}{CR70} \right)_{-1} - \frac{0.11714}{(0.92)} \left(\frac{CRND70}{CR70} \right)_{-1} \\ (0.185)$$

$$- \frac{0.05431}{(0.43)} \left(\frac{CRD70}{CR70} \right)_{-1} + \frac{0.66464}{(3.94)} \left(\frac{CRS70}{CR70} \right)_{-1}$$

$$+ \frac{0.02112}{(0.41)} \frac{PFCC}{PNF70} + \frac{0.05884}{(3.08)} \frac{1.71449 \text{ XIT}}{ZD70}$$

$$+ \frac{0.08986}{(1.31)} \frac{100.BDN*9/PIWH70}{ZD70} - \frac{0.01802}{(0.85)} \frac{XAGT70_{-1}}{ZD70}$$

$$R^2 = 0.949 \quad S.E. = 0.002 \quad D.W. = 3.24 \\ \text{Sample Period 1957-1974} \quad D. = 3.77$$

(C.5c) Supply Determination

$$\begin{array}{rcl} \text{CRS70} & = & 0.92528 \text{ (.43868 XSER70)} - 0.35615 \\ (32.53) & & (71.78) \qquad\qquad\qquad (0.75) \end{array}$$

$$\begin{array}{lll} R^2 = 0.997 & \text{S.E.} = 0.51 & \text{D.W.} = 0.76 \\ \text{Sample Period 1956-1974} & & \end{array}$$

(C.6) CRNS70 Consumption, Non-Services

(C.6a) Income Determination

$$\begin{array}{rcl} \frac{\text{CRNS70}}{\text{ZD70}} & = & 0.28946 + 0.73564 \frac{\text{XAGT70}_{-1}}{\text{ZD70}} \\ (1.042) & & (3.10) \qquad (7.43) \\ & & + 1.04188 \left(\frac{.27291 \text{ XISG} + .39034 \text{ XIPF}}{\text{ZD70}} \right) \\ & & (2.97) \end{array}$$

$$\begin{array}{lll} R^2 = 0.955 & \text{S.E.} = 0.022 & \text{D.W.} = 1.67 \\ \text{Sample Period 1956-1974} & & \end{array}$$

(C.6b) Residual or Identity Determination

$$\text{CRNS70} \equiv \text{CR70} - \text{CRS70}$$

T. BUDGET REVENUES

$$DDF \equiv \frac{BD^*9}{BGN^*}$$

Defense Share

$$DPRC \equiv \frac{PRC}{PRC_{-1}} - 1.$$

Consumption Price Deflator,
Rate of Change

$$ZW^* \equiv ZGW^* + ZWK^*$$

Money Wage Income

(T.1) TDP* Deductions from Gross Profits

$$\frac{TDP^*}{ZPG^*} = 1.02975 \text{ RTDP9} + 1.22629 (DDF-0.1275) - 0.08761 Q6768$$

(80.92) (2.87) (3.33)

(0.718)

$$R^2 = 0.844$$

$$S.E. = 0.034$$

$$D.W. = 1.30$$

Sample Period 1958-1974

(T.2) TT* Turnover Tax

$$\frac{TT^*}{ZW^*} = 0.67775 (1. - QSH68) + 0.32344 QSH68$$

(49.80) (76.48)

(0.392)

$$- 0.01781 (1. - QSH68) * QT50 + 0.85416 DPRC_{-1}$$

(18.76) (3.88)

$$- 0.63475 (DDF - 0.1275)$$

(4.03)

$$R^2 = 0.987$$

$$S.E. = 0.008$$

$$D.W. = 2.32$$

Sample Period 1958-1974

(T.3) TOSS* Other Revenues from Social Sector (including Social Insurance Deductions)

$$\frac{\text{TOSS}^*}{\text{ZPG}^*} = 0.54012 + 0.14276 \text{ Q6165} + 0.30279 \text{ Q5860} \\ (26.89) \quad (6.01) \quad (11.68) \\ (0.608)$$

$$- 0.06603 \text{ Q6672} \\ (2.90)$$

$$R^2 = 0.969 \quad \text{S.E.} = 0.028 \\ \text{Sample Period 1958-1974}$$

$$\text{D.W.} = 2.96$$

(T.4) TSD* Social Insurance Deductions

$$\frac{\text{TSD}^*}{\text{ZW}^*} = 0.05730 - 0.001283 \text{ Q6768} \\ (491.00) \quad (4.15) \\ (0.057)$$

$$R^2 = 0.592 \quad \text{S.E.} = 0.004 \\ \text{Sample Period 1961-1974}$$

$$\text{D.W.} = 0.72$$

(T.5) TPOP* Taxes on the Population

$$\frac{\text{TPOP}^*}{\text{ZW}^*} = 0.09226 + 0.01759 \text{ Q5859} - 0.01203 \text{ Q6467} \\ (97.64) \quad (7.30) \quad (6.57) \\ (0.092)$$

$$R^2 = 0.896 \quad \text{S.E.} = 0.003 \\ \text{Sample Period 1958-1974}$$

$$\text{D.W.} = 1.39$$

(T.6) TAXES* Personal Taxes (for Disposable Income)

$$\text{TAXES}^* = \text{TPOP}^* + \text{TAX}^*9$$

(T.7) TR* Total Revenues, State Budget

$$TR^* \equiv TDP^* + TT^* + TOSS^* + TPOP^*$$

B. STATE BUDGET OUTLAYS

$$DDF \equiv \frac{BD^*9}{BGN^*} - 0.126$$

Defense Share, Deviation from
Mean

$$DWG \equiv \frac{WGS^*}{WGS^*_{-1}} - 1.03433$$

Rate of Change of Government
Wage, Deviation from Mean

Q6768

Industrial Price Reform Dummy

Q65

Governmental Financial Reorganization

(B.1) BF* Financing of the National Economy

$$\frac{BF^*}{BF^*_{-1}} = 1.06561 - 0.11691 (Q61-0.0625) + 0.06702 Q6768$$

(1.082) (119.64) (3.50) (2.74)

$$+ 0.12259 Q70$$

(3.67)

$$R^2 = 0.747$$

$$S.E. = 0.032$$

$$D.W. = 2.86$$

Sample Period 1959-1974

(B.2) BSC* Social and Cultural Measures (including Science)

$$\frac{BSC^*}{BSC^*_{-1}} = 1.08271 + 0.56345 DWG - 0.01749 Q7175$$

(1.078) (376.86) (7.09) (3.04)

$$R^2 = 0.830$$

$$S.E. = 0.010$$

$$D.W. = 1.68$$

Sample Period 1959-1974

(B.3) BNAUK* Science

$$\frac{\text{BNAUK}^*}{\text{BNAUK}^*_{-1}} = 1.05050 - 0.008985 \text{ (QT50-23.) QSH72}$$

$$\quad \quad \quad (134.69) \quad (8.24)$$

$$(1.102)$$

$$R^2 = 0.829 \quad \quad \quad \text{S.E.} = 0.019 \quad \quad \quad \text{D.W.} = 2.50$$

Sample Period 1959-1974

(B.4) BAD* Administration

$$\frac{\text{BAD}^*}{\text{BAD}^*_{-1}} = 1.02362 + 1.23163 \text{ DWG} + 0.04589 \text{ Q6669}$$

$$\quad \quad \quad (122.16) \quad (5.41) \quad \quad \quad (2.83)$$

$$(1.038)$$

$$R^2 = 0.751 \quad \quad \quad \text{S.E.} = 0.028 \quad \quad \quad \text{D.W.} = 2.81$$

Sample Period 1960-1974

(B.5) BRES* Expenditure Residual

$$\frac{\text{BRES}^*}{\text{BRES}^*_{-1}} = 1.06512 - 0.41976 \text{ (Q63+Q67-0.133)}$$

$$\quad \quad \quad (33.83) \quad (4.48)$$

$$(1.065)$$

$$+ 0.56826 \text{ (Q63}_{-1} + \text{Q69} - 0.133)$$

$$\quad \quad \quad (6.06)$$

$$R^2 = 0.848 \quad \quad \quad \text{S.E.} = .122 \quad \quad \quad \text{D.W.} = 1.22$$

Sample Period 1960-1974

(B.6) BGN* Total Expenditures

$$\text{BGN}^* \equiv \text{BF}^* + \text{BSC}^* + \text{BAD}^* + \text{BRES}^* + \text{BD}^*9$$

(B.7) BTRAN* Transfer Payments (for Disposable Income)

$$\frac{BTRAN^*}{BTRAN^*_{-1}} = 1.08962 + 0.58739 DWG + 0.45132 \left(\frac{XAGT70}{XAGTN} - 1. \right) \\ (142.71) \quad (2.90) \quad (3.88) \\ (1.076)$$

$$R^2 = 0.698 \quad S.E. = 0.025 \quad D.W. = 2.55 \\ \text{Sample Period 1959-1974}$$

(B.8) BRESDEV Index of Research and Development Expenditures
(Science from Budgetary and Non-Budgetary Financing)

$$\frac{BRESDEV}{BRESDEV_{-1}} - 1. = 0.24665 - 0.000757 QT50 \\ (12.52) \quad (6.54) \\ (0.109)$$

$$- 0.05106 (Q6567 + Q68) \\ (4.14)$$

$$R^2 = 0.839 \quad S.E. = 0.021 \quad D.W. = 1.82 \\ \text{Sample Period 1958-1973}$$

(B.9) BADMIN Index of State Administrative Expenditures

$$\frac{BADMIN}{BADMIN_{-1}} - 1. = 0.02994 + 0.20913 \left(\frac{BAD^*}{BAD^*_{-1}} - 1. \right) \\ (7.64) \quad (3.46) \\ (0.0385)$$

$$R^2 = 0.500 \quad S.E. = 0.0114 \quad D.W. = 2.09 \\ \text{Sample Period 1960-1973}$$

(B.10) BDT* Total Defense and State Reserves, Current Ruble

$$BDT^* \equiv BD^*9 + BDR^*9 + BDSR^*9$$

(B.11) BDT70 Defense and State Reserves, 1970 Rubles

$$\text{BDT70} \equiv \frac{5.320}{3.8} \text{NMD9} + \text{BDSR*9}$$

$$+ 100.\text{BDN*9}/\text{PIWH70}$$

$$+ \text{BDR*9}/\left(.2 \frac{\text{WGS*}}{1572.} + .8 \frac{\text{PIWH70}}{100.}\right)$$

E. Exports(E.1) ERMCM* Export of Raw Materials and Semifabricates to CMEA

$$\begin{aligned}
 100 \frac{\text{ERMCM}^*}{\text{PERMCM9}} &= - 937.22 + 30.983 \text{ YCMEA9} \\
 &\quad (3.63) \quad (15.5) \\
 &\quad (3098) \\
 &\quad - 13.364 \left\{ 100 \left(\frac{\text{PRMW9}}{\text{PTW9}} - \frac{\text{PRMW9}_{-1}}{\text{PTW9}_{-1}} \right) \right. \\
 &\quad \quad (1.26) \\
 &\quad \quad \left. - (\text{PERMCM9} - \text{PERMCM9}_{-1}) \right\}
 \end{aligned}$$

$$\begin{aligned}
 R^2 &= 0.964 & \text{S.E.} &= 195 & \text{D.W.} &= 1.23 \\
 \text{Sample Period} &1961-1973
 \end{aligned}$$

(E.2) EMACM* Exports of Machinery, to CMEA

$$\begin{aligned}
 \text{EMACM}^* &= - 712.392 + 0.658452 \text{ ERMCM}^* - 125.552 \text{ Q4590} \\
 &\quad (2674) \quad (10.65) \quad (26.57) \quad (4.65)
 \end{aligned}$$

$$\begin{aligned}
 R^2 &= 0.985 & \text{S.E.} &= 66 & \text{D.W.} &= 1.51 \\
 \text{Sample Period} &1960-1973
 \end{aligned}$$

(E.3) EGRCM* Exports of Grain, to CMEA

$$\begin{aligned}
 \frac{\text{EGRCM}^*}{\text{NPOP9}} &= 2.06403 + 2.45125 * \left(\frac{\text{XGR}}{\text{NPOP9}} - \frac{\text{XGRCM9}}{\text{NCM9}} \right) \\
 &\quad (10.97) \quad (3.49) \\
 &\quad (1.09) \\
 &\quad + 3.3278 \left(\frac{\text{XGR}_{-1}}{\text{NPOP9}_{-1}} - \frac{\text{XGRCM9}_{-1}}{\text{NCM9}_{-1}} \right) \\
 &\quad \quad (3.80) \\
 &\quad + 2.23734 \frac{\text{GRSTK}}{\text{NPOP9}} \\
 &\quad \quad (2.99)
 \end{aligned}$$

$$\begin{aligned}
 R^2 &= 0.808 & \text{S.E.} &= 0.14 & \text{D.W.} &= 2.29 \\
 \text{Sample Period} &1960-1972
 \end{aligned}$$

Where:

$$\text{GRSTK} = \sum_{I=1}^3 (\text{XGR}_{-I} - \text{XGRPK}_{-I})$$

(E.4) ECOCM* Exports of Consumption Goods; other than Grain

$$\text{ECOCM}^* = 164.554 + 4.51039 \text{ XAGT70}_{-1} - 3.78446 \text{ XGRCM9}$$

(254.) (2.19) (1.85) (1.60)

$$R^2 = 0.239 \quad \text{S.E.} = 38 \quad \text{D.W.} = 1.03$$

Sample Period 1960-1973

(E.5) ETCM* Total Exports to CMEA

$$\text{ETCM}^* \equiv \text{ERMCM}^* + \text{EMACM}^* + \text{EGRCM}^* + \text{ECOCM}^* + \text{EUSCM}^*9$$

(E.6) ENETCM* Balance of Trade with CMEA

$$\text{ENETCM}^* \equiv \text{ETCM}^* - \text{MTCM}^*$$

(E.7) ENFDW\$ Non-food Exports to the Developed West

$$\frac{\text{ENFDW\$}}{\text{ENFDW\$}_{-1}} - 1. = -0.07584 + 0.27125 \left(\frac{\text{MTDW\$} - \text{ENETDW\$}_{-1}}{\text{MTDW\$}_{-1}} - 1. \right)$$

(1.86) (1.29)

$$+ 1.27199 \left(\frac{\text{WTDW9} \cdot \text{PENFDW9}}{\text{WTDW9}_{-1} \cdot \text{PENFDW9}_{-1}} - 1. \right)$$

(2.80)

$$R^2 = .820 \quad \text{S.E.} = 0.083 \quad \text{D.W.} = 1.34$$

Sample Period 1961-1973

(E.8) EGRDW\$ Grain Exports to the DW

$$\frac{100 \text{ EGRDW\$}}{\text{PGR9} \text{ NPOP9}} = 1.73703 - 3.88386 \frac{\text{XGRWE9}}{\text{NWE9}}$$

(0.217) (5.99) (4.92)

$$+ 2.06302 \frac{\text{GRSTK}}{\text{NPOP9}}$$

(4.74)

$$R^2 = 0.786 \quad \text{S.E.} = 0.091 \quad \text{D.W.} = 1.98$$

Sample Period 1960-1972

Where:

GRSTK is defined below (E.3)

(E.9) EFODW\$ Export of Food other than Grain to the DW

$$\text{EFODW\$} = -132.72 + 3.22044 \text{ XAGT70}_{-1}$$

(86.5) (3.28) (5.48)

$$R^2 = 0.714 \quad \text{S.E.} = 21 \quad \text{D.W.} = 1.29$$

Sample Period 1960-1973

(E.10) ETDW\$ Total Exports to the Developed West

$$\text{ETDW\$} \equiv \text{ENFDW\$} + \text{EGRDW\$} + \text{EFODW\$}$$

(E.11) ENETGR Net Balance of Grain Trade

$$\text{ENETGR} \equiv 1.1111 \text{ EGRCM*} + \frac{100.}{\text{PGR9}} (\text{EGRDW\$} + \text{EGRLDC\$} - \text{MGRDW\$})$$

(E.12) ENETDW\$ Balance of Trade with the DW

$$\text{ENETDW\$} \equiv \text{ETDW\$} - \text{MTDW\$}$$

(E.13) ETLDC\$ Total Exports to the Less Developed Countries

$$\text{ETLDC\$} = -137.601 + 0.213556 * \text{WTLDC9}$$

(1035) (1.54) (3.63)

$$+ 0.339775 * \text{ETLDC\$}_{-1}$$

(1.51)

$$R^2 = 0.954 \quad \text{S.E.} = 93 \quad \text{D.W.} = 2.07$$

Sample Period 1961-1973 D. = 0.22

(E.14) EGRLDC\$ Exports of Grain to the LDC's

$$\frac{\text{EGRLDC\$} * 100}{\text{NPOP9} * \text{PGR9}} = 2.47943 + 1.42838 * \frac{\text{GRSTK}}{\text{NPOP9}}$$

(0.33) (2.09) (2.42)

$$- 9.95524 * \frac{\text{XGRLDC9}_{-1}}{\text{NLDC9}_{-1}}$$

(1.76)

$$R^2 = 0.404 \quad \text{S.E.} = 0.12 \quad \text{D.W.} = 1.57$$

Sample Period 1960-1972

(E.14) EGRLDC\$ Exports of Grain to the LDC's (Continued)

Where GRSTK defined below (E.3).

(E.15) EOSC\$ Exports to Yugoslavia and the Far Eastern Socialist Countries

$$\text{EOSC\$} = - 174.24 + 4.26099 * \text{WT9} + 0.38366 * \text{EOSC\$}_{-1}$$

(690) (2.94) (2.69) (1.44)

$$R^2 = 0.970 \quad \text{S.E.} = 62 \quad \text{D.W.} = 1.80$$

Sample Period 1961-1973 D. = 1.35

(E.16) EMACH\$ Exports of Machinery to China

$$\text{EMACH\$} = 17.40668 + 0.35579 \text{ GNPCH9} - 39.3286 \text{ Q6870}$$

(44) (0.48) (1.02) (2.84)

$$R^2 = 0.509 \quad \text{S.E.} = 20 \quad \text{D.W.} = 1.80$$

Sample Period 1962-1972

(E.17) EOCH\$ Exports of Other than Machinery to China

$$\text{EOCH\$} = - 9.2943 + 0.48417 \text{ EMACH\$}$$

(88) (0.56) (1.57)

$$+ 0.66898 \text{ EOC\$}_{-1}$$

(7.20)

$$R^2 = 0.898 \quad \text{S.E.} = 28 \quad \text{D.W.} = 2.83$$

Sample Period 1961-1973 D. = 1.66

(E.18) ETCH\$ Total Exports to China

$$\text{ETCH\$} = \text{EMACH\$} + \text{EOCH\$}$$

(E.19) ECUBA\$ Exports to Cuba

$$\text{ECUBA\$} = - 12.8513 + 3.71639 \text{ WT9} + 37.719 \text{ Q6263}$$

$$(0.26) \quad (12.38) \quad (0.96)$$

$$R^2 = 0.948$$

$$\text{S.E.} = 46$$

$$\text{D.W.} = 0.93$$

Sample Period 1961-1973

(E.20) ETW\$ Exports to the World

$$\text{ETW\$} \equiv \text{ETDW\$} + \text{ETCM* PREX9} + \text{ETCH\$} + \text{EOSC\$}$$

$$+ \text{ECUBA\$} + \text{ETLDC\$} + \text{EUSW\$9}$$

(E.21) ETW70 Exports to the World at Domestic Constant Prices

$$\text{ETW70} \equiv 1.5 \frac{100 \text{ ETW\$}}{\text{PREX9 PTX9}}$$

M. Imports(M.1) MRMCM* Imports of Raw Materials and Semifabricates from CMEA

$$\frac{100 \text{ MRMCM}^*}{\text{PMRMCM9}} = 502.182 + 0.073422 \frac{100 \text{ ERMCM}^*}{\text{PERMCM9}}$$

(13.02) (5.81)

(717)

$$+ 0.13713 \text{ DEVMMACM}^*_{-1}$$

(1.97)

$$R^2 = 0.755$$

$$\text{S.E.} = 42$$

$$\text{D.W.} = 1.61$$

Sample Period 1960-1973

Where:

$$\text{DEVMMACM}^* = \{\text{MMACM}^* - (-983.61 + 179.55 \text{ QT50})\}$$

(M.2) MMACM* Imports of Machinery from CMEA

$$\text{MMACM}^* = -756.457 + 1.09900 \text{ ERMCM}^*$$

(2150) (4.88) (19.09)

$$+ 1.71429 \text{ DEVEMACM}^*_{-1}$$

(3.10)

$$R^2 = 0.972$$

$$\text{S.E.} = 145$$

$$\text{D.W.} = 1.47$$

Sample Period 1960-1973

Where:

$$\text{DEVEMACM}^* = \{\text{EMACM}^* - (-915.905 + 109.89 \text{ QT50})\}$$

(M.3) MFOCM* Imports of Food from CMEA

$$\text{MFOCM}^* = -296.915 + 5.15949 \text{ CRF70}$$

(400) (1.99) (2.26)

$$+ 0.50700 \text{ MFOCM}^*_{-1}$$

(2.21)

$$R^2 = 0.968$$

$$\text{S.E.} = 34$$

$$\text{D.W.} = 2.38$$

Sample Period 1960-1973

$$\text{D.} = 1.38$$

(M.4) MCOCM* Imports of Manufactured Consumer Goods from CMEA

$$\text{MCOCM}^* = - 211.75 + 12.3971 \text{ CRND70} \\ (1059) \quad (1.37) \quad (1.22)$$

$$+ 0.18248 \text{ ENETCM}^*_{-1} + 0.86325 \text{ MCOCM}^*_{-1} \\ (1.41) \quad (3.93)$$

$$R^2 = 0.985 \quad \text{S.E.} = 59 \\ \text{Sample Period 1960-1973}$$

$$\text{D.W.} = 1.89 \\ \text{D.} = 0.36$$

(M.5) MTCM* Total Imports from CMEA

$$\text{MTCM}^* = \text{MRMCM}^* + \text{MMACM}^* + \text{MFOCM}^* + \text{MCOCM}^* + \text{MUSCM}^*9$$

(M.6) MNGDW\$ Imports other than Grain from the Developed West

$$\frac{\text{MNGDW\$}}{\text{P599}} = - 22.17793 + 0.44185 \text{ XIT} + 3.74336 \text{ FLQ}_{-1} \\ (18.249) \quad (4.83) \quad (10.04) \quad (3.04)$$

$$R^2 = 0.954 \quad \text{S.E.} = 1.604 \\ \text{Sample Period 1961-1973}$$

$$\text{D.W.} = 1.74$$

(M.7) MMADW\$ Total Machinery Imports from the Developed West

$$\ln \frac{100 \cdot \text{MMADW\$}}{\text{P71GE9}_{-1} \text{ IIN}} = 3.72053 + 0.21729 \ln \text{ FLQ}_{-1} \\ (3.715) \quad (64.18) \quad (3.22) \\ - 0.07814 \text{ Q6466} + 0.32515 \text{ QSH68} \\ (0.82) \quad (2.47)$$

$$R^2 = 0.671 \quad \text{S.E.} = 0.110 \\ \text{Sample Period 1961-1973}$$

$$\text{D.W.} = 2.37$$

(M.8) MCODW\$ Imports of Consumer Goods other than Grain from the DW

$$\frac{\text{MCODW\$}}{\text{MNGDW\$} - \text{MUSDW\$}_9} = -0.09594 + 1.54632 \frac{\text{CR70} - \text{CR70}_{-1}}{\text{CR70}_{-1}}$$

(0.0732) (1.55) (2.02)

$$+ 1.25745 \frac{\text{CRD70}}{\text{CR70}} - 0.12083 \frac{\text{MGRDW\$}}{\text{MTDW\$}}$$

(2.07) (1.11)

$$R^2 = 0.501$$

$$\text{S.E.} = 0.038$$

$$\text{D.W.} = 1.21$$

Sample Period 1960-1973

(M.9) MRMDW\$ Imports of Raw Materials from the DW

$$\text{MRMDW\$} \equiv \text{MNGDW\$} - \text{MMADW\$} - \text{MCODW\$} - \text{MUSDW\$}_9$$

(M.10) MGRDW\$ Imports of Grain from the Developed West

$$\frac{100 \cdot \text{MGRDW\$}}{\text{PGR9} \cdot \text{GRAVE}} + \left[\frac{100 \cdot \text{MGRDW\$}}{\text{PGR9} \cdot \text{GRAVE}} \right]_{-1} = -2.39634 + 0.14315 \text{ QT50}$$

(1.552) (1.51) (1.90)

$$- 19.79195 \frac{\text{GRSTK}}{\text{GRAVE}}$$

(3.42)

$$R^2 = 0.545$$

$$\text{S.E.} = 0.925$$

$$\text{D.W.} = 2.08$$

Sample Period 1961-1973

Where:

$$\text{GRAVE} \equiv \text{XGR} + \text{XGR}_{-1} + \text{XGR}_{-2}$$

$$\text{GRSTK} \equiv \sum_{i=1}^3 (\text{XGR}_{-i} - \text{XGRPK}_{-i})$$

(M.11) MTDW\$ Total Imports from the Developed West

$$\text{MTDW\$} \equiv \text{MNGDW\$} + \text{MGRDW\$}$$

(M.12) MTLDC\$ Total Imports from the Less Developed Countries

$$\text{MTLDC\$} = - 99.3283 + 0.507074 \text{ ETLDC\$} + 1538.13 \left\{ \frac{\text{PRMW9}}{\text{PMAW9}} - \frac{\text{PRMW9}_{-1}}{\text{PMAW9}_{-1}} \right\}$$

(1.43) (2.66) (3.78)

(1064)

$$- 136.922 \text{ Q67} + 0.674961 \text{ MTLDC\$}_{-1}$$

(1.86) (3.23)

$R^2 = 0.989$

$\text{S.E.} = 67$

$\text{D.W.} = 2.04$

Sample Period 1960-1973

$\text{D.} = 0.11$

(M.13) MOSC\$ Total Imports from Yugoslavia and the Far Eastern Socialist Countries

$$\text{MOSC\$} = 95.07715 + 0.46756 \text{ EOSC\$}$$

(418) (2.50) (9.33)

$R^2 = 0.888$

$\text{S.E.} = 57$

$\text{D.W.} = 0.76$

Sample Period 1961-1973

(M.14) MTCH\$ Imports from China

$$\text{MTCH\$} = -3.81454 + 1.03969 \text{ ETCH\$} + 212.664 \text{ Q6164}$$

(259) (0.30) (23.99) (11.14)

$R^2 = 0.987$

$\text{S.E.} = 31$

$\text{D.W.} = 3.01$

Sample Period 1960-1972

(M.15) MCUBA\$ Imports from Cuba

$$100. \frac{\text{MCUBA\$}}{\text{PSUGSU9}} = 347.80 + 5.31084 \text{ XSUG9}_{-1} - 0.86734 \text{ WT9}$$

(2.10) (2.83) (1.69)

(311)

$$- 213.32 \frac{\text{PSUGW9}}{\text{PSUGSU9}}$$

(1.56)

$R^2 = 0.519$

$\text{S.E.} = 81$

$\text{D.W.} = 2.81$

Sample Period 1960-1973

(M.16) MTW\$ Imports from the World

$$MTW\$ \equiv MTDW\$ + MTCM* PREX9 + MTLDC\$ + MOSC\$ + MCUBA\$ + MUSW\$9$$

(M.17) MTW70 Imports from the World at Constant Domestic Prices

$$MTW70 \equiv 2.00 \frac{100MTW\$}{PREX9 PTM9}$$

(M.18) MIEIN\$ Imports from Developed West, Machinery and Equipment (less Transport Equipment)

$$\ln \frac{100.*MIEIN\$}{IIN*P71GE9_{-1}} = 3.48565 + 0.17595 \ln FLQ_{-1} \\ (3.465) \quad (55.88) \quad (2.42)$$

$$- 0.34055 Q6466 + 0.36836 QSH68 \\ (3.33) \quad (2.60)$$

$$R^2 = 0.844 \quad S.E. = 0.118 \quad D.W. = 2.27 \\ \text{Sample Period 1961-1973}$$

(M.19) MTM100-5* Machinery Imports, Total, FTN10: Metal-Working (Including Complete Plants, FTN105)

$$\ln \frac{100.MTM100-5*}{IIMB*P71GE9_{-1}} = 3.95284 + 0.27371 \ln FLQ_{-1} + 0.36289 Q70 \\ (4.016) \quad (92.63) \quad (4.23) \quad (2.91)$$

$$+ 0.31255 QSH68 + 0.05595 QSH68 (QT50-19.) \\ (2.68) \quad (1.95)$$

$$R^2 = 0.797 \quad S.E. = 0.113 \quad D.W. = 2.15 \\ \text{Sample Period 1961-1973}$$

(M.20) MTM120-9* Machinery Imports, Total, FTN12: Mining,
Metallurgy and Petroleum

$$\ln \frac{100.MTM120-9*}{IIPP*P71GE9_{-1}} = 4.36190 + 0.09478 \ln FLQ_{-1} + 0.16944 QFYP$$

(4.283) (37.67) (1.45) (2.60)

$$+ 0.12421 QSH68 - 0.13378 QSH68 (QT50-19.)$$

(1.07) (4.86)

$R^2 = 0.909$ S.E. = 0.109 D.W. = 2.45

Sample Period 1961-1973

(M.21) MIECH\$ Machinery Imports, West, Chemical Equipment

$$\ln \frac{100.MIECH\$}{IICH*P71GE9_{-1}} = 4.74708 + 0.35898 \ln FLQ_{-1}$$

(4.454) (46.90) (2.79)

$$- 0.47803 QFYP + 0.33654 QSH68$$

(3.62) (1.55)

$R^2 = 0.667$ S.E. = 0.221 D.W. = 2.41

Sample Period 1961-1973

F. Hard Currency(F.1) FNETHC Hard Currency Balance of Trade

$$\text{FNETHC\$} = - 60.7808 + 1.21162 \text{ ENETDW\$}$$

(-434) (1.45) (14.32)

$$R^2 = 0.945 \qquad \text{S.E.} = 123 \qquad \text{D.W.} = 2.12$$

Sample Period 1960-1973

(F.2) FCREP\$ Credit Repayments

$$\text{FCREP\$} = 0.73024 + 0.28217 \text{ FCDR\$}_{-1} + 0.68156 \text{ FCREP\$}_{-1}$$

(246) (0.05) (2.90) (3.10)

$$R^2 = 0.976 \qquad \text{S.E.} = 28 \qquad \text{D.W.} = 1.26$$

Sample Period 1960-1973

(F.3) FDEBT\$ Outstanding Debt

$$\text{FDEBT\$} \equiv \text{FDEBT\$}_{-1} + \text{FCDR\$}_9 - \text{FCREP\$}$$

(F.4) FINT\$ Interest Payments

$$\text{FINT\$} = - 4.0578 + 0.055122 (\text{FDEBT\$} + \text{FDEBT\$}_{-1})/2$$

(41.9) (5.32) (76.97)

$$R^2 = 0.998 \qquad \text{S.E.} = 1.6 \qquad \text{D.W.} = 1.96$$

Sample Period 1960-1972

(F.5) FDHC\$ Hard Currency Inflow (Balance of Payments)

$$\text{FDHC\$} \equiv \text{FNETHC\$} + \text{FSER\$}_9 + \text{FCDR\$}_9 + \text{FGSALES\$} - \text{FINT\$} - \text{FCREP\$}$$

(F.6) FSTK\$ Hard Currency Holdings

$$\text{FSTK\$} \equiv \text{FSTK\$}_{-1} + \text{FDHC\$}$$

(F.7) FGSALE\$ Gold Sales

$$\begin{aligned}
 \text{FGSALE\$} &= 263.274 - 0.14013 \frac{\text{FNETHC\$} + \text{FNETHC\$}_{-1}}{2} \\
 &\quad (3.49) \quad (1.00) \\
 (261) & \\
 &- 0.45661 (\text{FSTK\$} - \text{FGSALE\$}) \\
 &\quad (4.24)
 \end{aligned}$$

$$\begin{aligned}
 R^2 &= 0.828 & \text{S.E.} &= 141 \\
 \text{Sample Period} &1961-1973
 \end{aligned}$$

$$\text{D.W.} = 2.27$$

(F.8) FGOLD Gold Reserves

$$\text{FGOLD} \equiv \text{FGOLD}_{-1} + \text{XGOLD9} - \frac{\text{FGSALE\$}}{\text{PGOLD9}}$$

(F.9) FLQ Liquidity Ratio

$$\text{FLQ} = \frac{\text{FGOLD PGOLD9} - \text{FDEBT\$}}{\text{MTDW\$}}$$

G. AGGREGATE IDENTITIES AND BALANCES(G.1) GNPA3 Gross National Product, Agriculture

$$\text{GNPA3} = \frac{.71826}{.74122} (\text{XAGT70} - \text{AVCP70})$$

(G.2) GNPNA3 Gross National Product, Non-Agricultural Sectors

$$\begin{aligned} \text{GNPNA3} = & 1.71449 \text{ XIT} + \frac{.25379}{.438} \text{ XCRUB} + .31581 \text{ XT7R} \\ & + .17065 \text{ XDTR} + .43868 \text{ XSER70} + \frac{5.320}{3.8} \text{ NMD9} \end{aligned}$$

(G.3) GNP3 Gross National Product

$$\text{GNP3} = (\text{GNPA3} + \text{GNPNA3}) / .96264$$

(G.4) GNMP3 Net Material Products

$$\begin{aligned} \text{GNMP3} = & 1.71449 \text{ XIT} + \frac{.25379}{.438} \text{ XCRUB} + \frac{.71826}{.74122} (\text{XAGT70} - \text{AVCP70}) \\ & + .31581 (.734) \text{ XDTR} + .17065 (.1264) \text{ XDTR} \end{aligned}$$

(G.5) GEUSUM3 GNP End-Use, Excluding Net Exports and Consumption

$$\begin{aligned} \text{GEUSUM3} = & \text{ISUM} + \text{BDSR*9} + .09971 \text{ BADMIN} + .09927 \text{ BRESDEV} \\ & + \frac{5.320}{3.8} \text{ NMD9} \end{aligned}$$

(G.6) GRESEM3 End- Use Residual

(Note: Actual Values used for GRESEM3 defined by

$$\text{GRESEM3} = \text{GNP3} - .001 (\text{ETW70} - \text{MTW70}) - \text{GEUSUM3} - \text{CR70}$$

$$\begin{aligned} \text{GRESEM3} = & 2.21834 + 0.47610 (\text{XAGT70} - \text{XAGTN}) \\ (2.690) & \quad (1.95) \quad (2.03) \end{aligned}$$

$$\begin{aligned} & - 0.68756 (\text{XAGT70}_{-1} - \text{XAGTN}_{-1}) \\ & \quad (2.70) \end{aligned}$$

(G.6) GRESEM3 End-Use Residual (Continued)

$R^2 = 0.475$ S.E. = 4.008 D.W. = 1.78
Sample Period 1960-1973

(G.7) GSIMRES Simulation Residual GNP Category

GSIMRES \equiv GNP3 - GEUSUM3 - CR70 - GRESEM3 - .001 (ETW70-MTW70)

NOTE: Actual values for GSIMRES are identically zero.
Solution values represent the difference between
"production" and "end use" determinations of GNP
when consumption is not obtained by residual identity.

SERIES LABEL	VAR#	DESCRIPTION	UNITS	SOURCE	PRECISION
AFR070	410	VALUE OF FEED FED TO LIVESTOCK, 1970 PRICES	R, 1970 RUBLES	SAIOH 062075	3
ALV070	101	VALUE OF PRODUCTIVE LIVESTOCK(END-YR), 170PRICE WGT5	R, 1970R	DER76-TRAN	3
ASCR2	408	AREA SOWN TO GRAIN	M, HECTARES	SAICER75	3
AXCP70	102	VALUE OF AGRICULTURAL CURRENT PURCHASES	B, 1970 RUBLES	DER1976	3
BAU*	149	STATE BUDGET EXPENDITURES, ADMINISTRATION	R CUR	NKH02	3
BAUMIN	424	INDEX OF ADMINISTRATION & MISC. SERVICES (EST, PRICES)	1970=100	OLR75	3
BOH09	152	STATE BUDGET EXPENDITURES, DEFENSE	B CUR	NKH02	3
BON09	153	DEFENSE NONPERSONNEL EXPENDITURES IN CURRENT PRICES	B, CURR,	COMH74	3
BOM09	429	DEFENSE AND EXPENDITURES IN CURRENT PRICES	B, CURR,	COMH74	3
ROSH09	428	CHANGE IN STATE RESERVES, MILITARY PROCUREMENT ESTIMATE	B, CUR, RUBLES	COMH76	1
BDT*	425	DEFENSE AND STATE RESERVES, CURRENT RUBLES	B, CUR, R	COMH76	3
BDT70	426	DEFENSE AND STATE RESERVES, 1970 RUBLES	R, 1970R	COMH76-TRAN	3
BGA*	146	STATE BUDGET EXPENDITURES, FINANCING THE NATIONAL ECONOMY, TOTAL	B CUR	NKH02	3
BNAUK*	151	STATE BUDGET EXPENDITURES, GOVT SPENDING, NATL ACCOUNTS BASIS	B CUR	NKH02	3
BUES*	148	SCIENCE EXPENDITURES, USSR BUDGET (CURRENT PRICES)	B RUHL	COMH73	3
BUESDEV	150	STATE BUDGET EXPENDITURE RESIDUAL	B RUHL	NKH02	3
BSC*	423	INDEX OF RESEARCH AND DEVELOPMENT (EST, PRICES)	1970=100	DER75	3
BRAN*	147	STATE BUDGET EXPENDITURES, SOCIAL AND CULTURAL MEASURES(INCL, S	R CUR	NKH02	3
BRAN*	241	TRANSFER PAYMENTS	B, CUR, RUBLES	JEC76	3
CRD70	137	CONSUMPTION OF DURABLES, 1970 EST, PRICES	R, 1970 RUBLES	JEC76	3
CRD70	135	CONSUMPTION OF FOOD, 1970 EST, PRICES	R, 1970 RUBLES	JEC76	3
CRD70	136	CONSUMPTION OF SOFT GOODS, 1970 EST, PRICES	R, 1970 RUBLES	JEC76	3
CRN570	224	CONSUMPTION OF NONSERVICES, 1970 EST, PRICES	B, 1970 RUBLES	JEC76-TRAN	3
CRS70	134	CONSUMPTION OF SERVICES, 1970 EST, PRICE WEIGHTS	B, 1970 RUBLES	JEC76, OLR75, TRAN	3
CR70	134	TOTAL CONSUMPTION, 1970 EST, PRICES	R, 1970 RUBLES	JEC76, OLR75, TRAN	3
ECOCM*	247	EXPORTS TO CMEA OF CATEGORY III AND IV EXCEPT GRAIN	MHB	MSUS	3
ECUDAS	262	EXPORTS OF FOOD TO THE DM	MSUS	DER	3
ECURCM*	256	GRAIN EXPORTS TO CMEA	MHR	DER	3
ECUDMS	261	GRAIN EXPORTS TO THE DM	MSUS	DER	3
ECUDCS	267	GRAIN EXPORTS TO LDC	MSUS	DER	3
ENACHS	269	EXPORTS OF MACHINERY TO CHINA	MSUS	DER	3
ENACM*	255	EXPORTS TO CMEA OF CMEA CATEGORY I COMMODITIES	MHR	INDIANA	3
ENETCM*	259	BALANCE OF TRADE WITH CMEA	MHR	INDIANA	3
ENETOM*	265	LTDMS-MTOMS	MSUS	DER	3
ENETCH	264	NET GRAIN EXPORT BALANCE AT 63 PRICES	CUNS, 63	DER	3
ENFCAS	260	EXPORTS TO THE DM OTHER THAN FOOD	MSUS	DER	3
EDUCH*	270	NONMACHINERY EXPORTS TO CHINA	MSUS	DER	3
EDUCS	268	EXPORTS TO YUGOSLAVIA AND THE FAR-EASTERN SOCIALIST COUNTRIES	MSUS	DER	3
ENACM*	254	EXPORTS TO CMEA OF CMEA CATEGORY II COMMODITIES	MHR	INDIANA	3
ETCHS*	271	TOTAL EXPORTS TO CHINA	MSUS	DER	3
ETCM*	258	TOTAL EXPORTS TO EUROPEAN CMEA(EXCL, YUGOSLAVIA, ALBANIA)	MHR	INDIANA	3
ETDMS	263	TOTAL EXPORTS TO THE DEVELOPED WEST	MSUS	DER	3
ETLDCS	266	TOTAL EXPORTS TO LDC	MSUS	DER	3
ETAS*	273	TOTAL EXPORTS TO THE WORLD	MSUS	DER	3
ETW70	274	TOTAL EXPORTS TO THE WORLD IN DOMESTIC CURRENCY	M 1970	INDIANA	3
EUSLM09	312	UNSPECIFIED EXPORTS TO CMEA	MHR	INDIANA	3
EUSK99	304	UNSPECIFIED EXPORTS TO THE WORLD	MSUS	DER	3
FCORP*	330	HARD CURRENCY CREDIT DRAWINGS	MSUS	DER	3
FCRFP*	322	CREDIT REPAYMENTS IN HARD CURRENCY	MSUS	DER	3

SOVIET MODEL DATABASE

DOCUMENTATION

SERIES LABEL	VAR#	DESCRIPTION	UNITS	SOURCE	PRECISION
FDFTS	323	OUTSTANDING DEBT AT THE END OF THE YEAR	MSUS	DER	3
FDHCS	325	HARD CURRENCY BALANCE OF PAYMENTS	MSUS	DER	3
FGOLD	326	GOLD RESERVES AT THE END OF THE YEAR	TONS	DER	3
FGSALES	327	GOLD SALES	MSUS	DER	3
FINTS	329	INTEREST PAYMENTS IN HARD CURRENCY	MSUS	DER	3
FLQ	329	HARD CURRENCY LIQUIDITY (GOLD+POLLDO+FDFTS)/MOMS	NONE	DER73-TRAN	5
FNETCS	321	HARD CURRENCY BALANCE OF PAYMENTS	MSUS	DER	3
FSER90	320	HARD CURRENCY BALANCE OF SERVICES AND TRANSFERS	MSUS	DER	3
ASTK3	326	ACCUMULATED HC HOLDINGS SINCE 1959	MSUS	DER	3
GEUSUM3	210	END-USE SUM (EXCLUDING CONSUMPTION, NET EXPORTS)	B, 1970M	DER75-TRAN	3
GNP3	420	SOVIET NET MATERIAL PRODUCT, EST, PRICE 1970 WEIGHTS	B, 1970R	DER75-TRAN	3
GNPA3	95	AGRICULTURAL GNP, TOTAL OUTPUT LESS CURRENT PURCHASES	B, 1970R	DER75-TRAN	3
GNPC90	306	GNP OF CHINA	1968=10	JIC	3
GNPA3	95	NONAGRICULTURAL GNP, EST, PRICE 1970 WEIGHTS	B, 1970M	DER75-TRAN	3
GNP3	96	SOVIET GNP, SOVMOOD III 1 (GNPA3+GNPA3)/,96264	B, 1970R	DER75-TRAN	3
GNSE43	191	GNP END-USE RESIDUAL = GNP3-GEUSUM3-CH70-.001(ETM70-MTM70)	B, 1970R	DER75-TRAN	3
CSIMPS	204	ZERGES TO USE AS ACTUAL VALUES FOR SIMULATION RESIDUAL	NONE	TRAN	3
IA	13	CAPITAL INVESTMENT IN AGRICULTURE 72R	NONE	NONE	3
ICAPHEP	155	INDEX OF CAPITAL REPAIRS	B, 197	TRAN	3
ICRUH	19	CAPITAL INVESTMENT IN CONSTRUCTION	1970=100	DER75	3
IFAG9	22	STATE BUDGET FINANCE, AGRICULTURE	B RUB	NARKHOZ	3
IFAJ9	227	STATE BUDGET FINANCING OF CENTRALIZED INV., ADJUSTED	B CURR	PRAYDA	3
IFIN9	20	INDUSTRY AND CONSTRUCTION	B CUR	TRAN	3
IFTRA9	21	TRANSPORTATION AND COMMUNICATION	B CUR	CUR DIG	3
IMS	16	INVESTMENT IN HOUSING, ADJ TO 1970 PRICES	B CUR	CUR DIG	3
IICH	6	CAPITAL INVESTMENT, (CHEMICALS AND PETROCHEMICALS)	B RUB	NARKHOZ	3
IICM	3	CAPITAL INVESTMENT, (CONSTRUCTION MATERIALS)	B 1970	NARKHOZ	3
IICP	3	CAPITAL INVESTMENT, (COAL PRODUCTS)	B 1970	NARKHOZ	3
IIEP	2	CAPITAL INVESTMENT, (ELECTROENERGY)	B 1970	NARKHOZ	3
IIFM	5	CAPITAL INVESTMENT, (FERROUS METALS)	B 1970	NARKHOZ	3
IIFP	8	CAPITAL INVESTMENT, (FOREST PRODUCTS(INCL PAPER))	B 1970	NARKHOZ	3
IIMB	7	CAPITAL INVESTMENT, (MACHINE BUILDING AND METAL WORKING)	B 1970	NARKHOZ	3
IIN	1	CAPITAL INVESTMENT IN INDUSTRY 72R	R 72R	NARKHOZ	3
IINF	12	CAPITAL INVESTMENT, NONFERROUS METALLURGY (RESIDUAL CATEGORY)	B, 1970R	NARKHOZ	3
IIFE	11	CAPITAL INVESTMENT, (PROCESSED FOOD INDUSTRY)	R 1970	NARKHOZ	3
IIFP	4	CAPITAL INVESTMENT, (PETROLEUM PRODUCTS)	B 1970	NARKHOZ	3
IISG	10	CAPITAL INVESTMENT, (LIGHT INDUSTRY)	B 1970	NARKHOZ	3
INA	18	INVESTMENT NONAGRICULTURAL	B RUB	TRAN	3
INCH9	235	BRANCH INVESTMENT SHARE: CHEMICALS & PETROCHEMICALS	NONE	NKH-THA	3
INCH9	238	BRANCH INVESTMENT SHARE: CONSTRUCTION MATERIALS	NONE	NKH-THA	3
INCP9	231	BRANCH INVESTMENT SHARE: COAL PRODUCTS	NONE	NKH-THA	3
INFP9	230	BRANCH INVESTMENT SHARE: ELECTROENERGY	NONE	NKH-THA	3
IRFM9	235	BRANCH INVESTMENT SHARE: FERROUS METALLURGY	NONE	NKH-THA	3
IRFP9	237	BRANCH INVESTMENT SHARE: FOREST PRODUCTS	NONE	NKH-THA	3
IRIC9	184	PERCENTAGE NONAGRICULTURAL INVESTMENT, CONSTRUCTION	NONE	TRAN	3
IRIM9	186	PERCENTAGE NONAGRICULTURAL INVESTMENT, HOUSING	NONE	TRAN	3
IRII9	181	PERCENTAGE NONAGRICULTURAL INVESTMENT, INDUSTRY	NONE	TRAN	3
IRIS9	187	PERCENTAGE NONAGRICULTURAL INVESTMENT, SERVICES	NONE	TRAN	3
IRIT9	185	PERCENTAGE, NON AGRICULTURAL INVESTMENT, TRANSPORT AND COMMUNIC	NONE	TRAN	3
IMP99	236	BRANCH INVESTMENT SHARE: MACHINE-BUILDING & METAL-WORKING	NONE	NKH-THA	3

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DOCUMENTATION

SERIES LABEL	VAR#	DESCRIPTION	UNITS	SOURCE	PRECISION
IPNF9	210	BRANCH INVESTMENT SHARE, NON-FERROUS (RESIDUAL SHARE)	NONE	NKH-TRA	3
IPPF9	210	BRANCH INVESTMENT SHARE, PROCESSED FOODS	NONE	NKH-TRA	3
IPPP9	212	BRANCH INVESTMENT SHARE, PETROLEUM PRODUCTS	NONE	NKH-TRA	3
IPSG9	210	BRANCH INVESTMENT SHARE, SOFT GOODS	NONE	NKH-TRA	3
ISF	17	CAPITAL INVESTMENT IN SERVICES	B RUB	NARKHUL	3
ISUM	410	TOTAL ACCUMULATION FUND, FIXED CAPITAL, INVENT, & LIVESTOCK	B, 1970R	NKH, CH, OEH-TRAN	3
ISONTA	176	INVENTORY STOCK, END YEAR, NON-TRADE, NON-AGRI, 1970 PRICES	B 197	TRAN	3
ISOT	157	INVENTORY STOCK, END YEAR, DOMESTIC TRADE, 1970 PRICES	B 197	TRAN	3
ITOTAL	14	INVESTMENT, NATIONAL ECONOMY	B RUB	TRAN	3
ITRUB	15	CAPITAL INVESTMENT IN TRANSPORT & COMMUNICATIONS	B RUB	NARKHUL	3
ITONTA	156	CHANGE IN INV. STOCK, END YEAR AT 1970 PRICES, NON-TRADE NON-AGRI	B 197	TRAN	3
ITOT	159	CHANGE IN INV. STOCK, END YEAR, NON-TRADE, NON-AGRI, 1970 PRICES	B 197	TRAN	3
JPS9	98	SUM OF DEVIATIONS FROM MONTHLY PRECIPITATION VALUES	CM	TRANS	3
JTW9	99	WEATHER INDEX, WINTER TEMP INDEX FOR SOUTHERN UKRAINE	NONE	D-G	3
KAIR	35	AGRICULTURAL FIXED CAPITAL (MEAN YEAR 1955 PRICES)	B RUB	DIAMON	3
KCOM	39	BASIC FUNDS, TRADE, SUPPLY, OTHER MP (JAN, 1, 1955 PRICES)	B, 1955R	NKH	3
KCR	36	BASIC FUNDS, CONSTRUCTION (JAN 1, 1955 PRICES)	B RUB	TRAN	3
KHA	42	ADJUSTED BASIC FUNDS, HOUSING (JAN 1, 1955 PRICES)	B RUB	TRAN	3
KHFI	38	BASIC FUNDS IN HOUSING	B RUB	NARKHUL	3
KIA	41	ADJUSTED BASIC FUNDS, INDUSTRY JAN 1, 1955 PRICES	B RUB	TRAN	3
KICHW	39	IMPORTED WESTERN MACHINERY, CHEMICALS AND PETROCHEMICALS (JAN, 1)	B, 1955 RUBLES	DMG76	5
KICH	29	CAPITAL STOCK, CHEMICALS AND PETROCHEMICALS (JAN, 1)	B, 1955R	COHN 70	3
KICM	32	CAPITAL STOCK, CONSTRUCTION MATERIALS	B, 1955R	COHN 70	3
KICP	26	CAPITAL STOCK, COAL PRODUCTS	B, 1955R	COHN 70	3
KIEP	25	CAPITAL STOCK, ELECTRIC POWER	B, 1955R	COHN 70	3
KIFM	28	CAPITAL STOCK, FERROUS METALS	B, 1955R	COHN 70	3
KIFP	31	CAPITAL STOCK, FOREST PRODUCTS	B, 1955R	COHN 70	3
KIH629	119	BASIC FUNDS ADJUSTMENT FOR 1962L-H TRANSFER OF HOUSING CAPITAL	B RUB	TRAN	3
KIH8M	340	IMPORTED MACHINERY, METAL-WORKING (JAN, 1)	B, 1955 RUBLES	DMG76	5
KIWB	30	CAPITAL STOCK, MACHINE-BUILDING AND METAL-WORKING	B, 1955R	COHN 70	3
KIWF	34	CAPITAL STOCK, PROCESSED FOODS	B, 1955R	COHN 70	3
KIPPM	31	IMPORTED MACHINERY, PETROLEUM & MINING (JAN, 1)	B, 1955 RUBLES	DMG76	5
KIPP	27	CAPITAL STOCK, PETROLEUM PRODUCTS	B, 1955R	COHN 70	3
KISG	33	CAPITAL STOCK, SOFT GOODS	B, 1955R	COHN 70	3
KITOT	24	CAPITAL STOCK, TOTAL INDUSTRY	B 195	COHN70	3
KITS9P	178	BASIC FUNDS ADJUSTMENT FOR 1958 I-T TRANSFER OF RR CAPITAL (AT	B RUB	TRAN	3
KIW	44	IMPORTED WESTERN MACHINERY, INDUSTRY (JAN, 1)	B, 1955 RUBLES	DMG76	5
KNCUM	165	NET CHANGE IN BASIC FUNDS, DOMESTIC TRADE	B, 1955R	NKH	3
KNOC	163	NET CHANGE IN BASIC FUNDS, CONSTRUCTION	B RUB	TRAN	3
KNDH	166	NET CHANGE IN BASIC FUNDS, HOUSING	B RUB	TRAN	3
KNDI	162	NET CHANGE IN BASIC FUNDS, INDUSTRY	B RUB	TRAN	3
KNDT	164	NET CHANGE IN BASIC FUNDS, TRANSPORT & COMMUNICATIONS	B RUB	TRAN	3
KNICW	172	NET CHANGE IN BASIC FUNDS, CHEM, & PETROCHEM,	B, 1955R	NKH	3
KNICM	175	NET CHANGE IN BASIC FUNDS, CONSTRUCTION MATERIALS	B, 1955R	NKH	3
KNICP	169	NET CHANGE IN BASIC FUNDS, COAL PRODUCTS	B, 1955R	NKH	3
KNIEP	168	NET CHANGE IN BASIC FUNDS, ELECTROENERGY	B, 1955R	NKH	3
KNIEM	171	NET CHANGE IN BASIC FUNDS, FERROUS METALLURGY	B, 1955R	NKH	3
KNIFF	174	NET CHANGE IN BASIC FUNDS, FOREST PRODUCTS	B, 1955R	NKH	3
KNIWR	173	NET CHANGE IN BASIC FUNDS, MACH, HLDC, METAL MFG	B, 1955R	NKH	3
KNIYP	177	NET CHANGE IN BASIC FUNDS, PROCESSED FOODS	B, 1955R	NKH	3

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SERIES LABEL	VARIABLE DESCRIPTION	UNITS	SOURCE	PRECISION
KNIPP	170 NET CHANGE IN BASIC FUNDS, PETROLEUM PRODUCTS	B, 1955R	NKH	3
KNISG	176 NET CHANGE IN BASIC FUNDS, SOFT GOODS	B, 1955R	NKH	3
KNSEH	167 NET CHANGE IN BASIC FUNDS, SERVICES	B, 1955R	NKH	3
KNSEH	40 BASIC FUNDS, SERVICES (JAN, 1)	B, 1955R	NKH	3
KNSEH	154 BASIC FUNDS, NATIONAL ECONOMY, JULY 1	B, 1955R	TRAN	3
KNSEH	43 ADJUSTED BASIC FUNDS, TRANSPORT AND COMMUNICATION (JAN 1, 1955 P	R RUB	TRAN	3
KNSEH	97 RAILROAD CAR UTILIZATION, AVE 24MR DISTANCE PER FREIGHT CAR	KMS/2	SVYAZIO	3
KNSEH	37 BASIC FUNDS, TRANS & COMM JAN 1, 1955 PRICES	B RUB	TRAN	3
KNSEH	104 PERCENT OF MEAT LIVESTOCK BEING FATTENED & YOUNG LIVESTOCK	PERCENT	NARKHOZ	3
KNSEH	278 IMPORTS FROM CMEA OF CMEA CATEGORY IV COMMODITIES	MRB	INDIANA	3
KNSEH	282 IMPORTS OF FOOD AND MANUF. CONS. GOODS, EXCLUDED GRAIN, FROM THE DM	MSUS	GER	3
KNSEH	280 IMPORTS FROM CMEA	MSUS	GER	3
KNSEH	277 IMPORTS FROM CMEA OF CMEA CATEGORY III COMMODITIES	MRB	INDIANA	3
KNSEH	284 GRAIN IMPORTS FROM THE DM	MSUS	GER	3
KNSEH	342 IMPORTS, MEAT, CHEMICAL EQUIPMENT	M, CUR. \$	GER74	3
KNSEH	211 IMPORTS, DEVELOPED WEST, MACHINERY & EQUIPMENT (LESS TRANSPORT EQUIP	MSUS	73JEC	3
KNSEH	276 IMPORTS FROM CMEA OF CMEA CATEGORY I COMMODITIES	MRB	INDIANA	3
KNSEH	281 MACHINERY IMPORTS FROM THE DM	MSUS	GER	3
KNSEH	280 IMPORTS FROM THE DM OTHER THAN GRAIN	MSUS	GER	3
KNSEH	287 IMPORTS FROM YUGOSLAVIA AND THE FAR EASTERN SOCIALIST COUNTRIES	MRB	INDIANA	3
KNSEH	275 IMPORTS FROM CMEA OF CMEA CATEGORY II COMMODITIES	MSUS	GER	3
KNSEH	283 IMPORTS FROM THE DM OTHER THAN MACHINERY, CONS., OR UNSPEC.	MRB	INDIANA	3
KNSEH	279 TOTAL IMPORTS FROM EUR. CMEA (EXCL. YUGOSLAVIA, ALBANIA)	MSUS	GER	3
KNSEH	285 TOTAL IMPORTS FROM THE DEVELOPED WEST	MSUS	GER	3
KNSEH	286 TOTAL IMPORTS FROM LDC	MSUS	GER	3
KNSEH	303 ME IMPORTS ALL METAL-WORKING M&E INCL. COMPLETE PLANTS	M, FT. RUBLES	VNTORG	3
KNSEH	341 ME IMPORTS MINING, METALLURGICAL AND PETROLEUM	M, FT. RUBLES	VNTORG	3
KNSEH	290 TOTAL IMPORTS FROM THE WORLD	MSUS	GER	3
KNSEH	291 TOTAL IMPORTS FROM THE WORLD IN DOMESTIC CURRENCY	M 1970	INDIANA	3
KNSEH	311 UNSPECIFIED IMPORTS FROM CMEA	MRB	GER	3
KNSEH	313 UNSPECIFIED IMPORTS FROM THE DM	MSUS	GER	3
KNSEH	317 UNSPECIFIED IMPORTS FROM THE WORLD	MSUS	GER	3
KNSEH	402 AGRICULTURAL EMPLOYMENT, KOLKHOZY (COLLECTIVE FARMS)	M, PERSO	FDAD75	3
KNSEH	66 AGRICULTURAL EMPLOYMENT, PRIVATE (MAN-YEAR EQUIVALENTS)	M, PERSO	FDAD75	3
KNSEH	65 AGRICULTURAL EMPLOYMENT, STATE AND COLLECTIVE FARMS	M, PERSO	FDAD75	3
KNSEH	401 AGRICULTURAL EMPLOYMENT, SOVKHOZY (STATE FARMS)	M, PERSO	FDAD75	3
KNSEH	67 AGRICULTURAL EMPLOYMENT, TOTAL	M	UM	3
KNSEH	294 POPULATION IN THE EUROPEAN CMEA	(000)	NKHOZ	3
KNSEH	74 HIGH-ED. EMP. ALL INDUSTRIAL CATEGORIES	(000)	NKHOZ	3
KNSEH	334 HIGH-ED. EMP. METALLURGY	(000)	NKHOZ	3
KNSEH	335 HIGH-ED. EMP. MINING	(000)	NKHOZ	3
KNSEH	75 HIGH-ED. EMP. TRANSPORT	(000)	NKHOZ	3
KNSEH	72 ENGINEERING-TECHNICAL WORKERS IN INDUSTRY	000 M	NARKHOZ	3
KNSEH	304 POPULATION IN AFRICA, SOUTH AMERICA AND SOUTH ASIA	M	UN	3
KNSEH	60 EMPLOYMENT, CONSTRUCTION	000 PER	RAPAWY	3
KNSEH	404 MILITARY EMPLOYMENT	M, PERSONS	LEF75	1
KNSEH	58 EMPLOYMENT FORESTRY	000 PER	RAPAWY	3
KNSEH	63 EMPLOYMENT, GOVERNMENT AND SERVICES	000 PER	NMG TRAN	3
KNSEH	45 EMPLOYMENT, INDUSTRIAL	000 PE	RAPAWY	3

SOVIET MODEL DATAANK

DOCUMENTATION

SERIES LABEL	VAR. DESCRIPTION	UNITS	SOURCE	PRECISION
51	AVERAGE ANNUAL EMPLOYMENT, BRANCH/CHEMICALS & PETROCHEMICALS	000ERS	RAPARY	3
52	AVERAGE ANNUAL EMPLOYMENT, BRANCH/CONSTRUCTION MATERIALS	000ERS	RAPARY	3
53	AVERAGE ANNUAL EMPLOYMENT, BRANCH/COAL PRODUCTION	000ERS	RAPARY	3
54	AVERAGE ANNUAL EMPLOYMENT, BRANCH/ELECTROENERGY	000ERS	RAPARY	3
55	AVERAGE ANNUAL EMPLOYMENT, BRANCH/FERROUS METALLURGY	000ERS	RAPARY	3
56	EMPLOYMENT, FOREST PRODUCTS (EXCL. PAPER)	THOU. P	RAPARY	3
57	AVERAGE ANNUAL EMPLOYMENT, BRANCH/MACHINE-BUILDING & METALWORK	000ERS	RAPARY	3
58	AVERAGE ANNUAL EMPLOYMENT, BRANCH/CEMENT (RESIDUAL)	000ERS	RAPARY	3
59	AVERAGE ANNUAL EMPLOYMENT, BRANCH/IRON-FERROUS METALLURGY	000ERS	RAPARY	3
60	ANNUAL EMPLOYMENT, PULP & PAPER	THOUS. P	RAPARY	3
61	AVERAGE ANNUAL EMPLOYMENT, BRANCH/PROCESSED FOOD	000ERS	RAPARY	3
62	AVERAGE ANNUAL EMPLOYMENT, BRANCH/PETROLEUM PRODUCTS	000ERS	RAPARY	3
63	AVERAGE ANNUAL EMPLOYMENT, BRANCH/SOFT GOODS (LIGHT INDUSTRY)	000ERS	RAPARY	3
64	EMPLOYMENT, ALL NON-AGRICULTURAL SECTORS	000ERS	RAPARY	3
65	EMPLOYMENT, OTHER	000 PE	RAPARY	3
66	EMPLOYMENT, TRADE ETC.	000 PE	RAPARY	3
67	EMPLOYMENT, TRANSPORTATION AND COMMUNICATIONS	000ERS	RAPARY	3
68	POPULATION, ABLE BODIED AGES (16-59/54)	M, PER	NKHOZ	3
69	POPULATION RURAL (END YEAR)	M, P	NKHOZ	3
70	POPULATION URBAN (END YEAR)	M, P	NKHOZ	3
71	POPULATION, TOTAL	M	NKHOZ	3
72	SPECIALISTS, TRCO (END YEAR), INTERPOLATION WITH LAGGED ENROLLMENT	000ERS	NKHOZ	3
73	POPULATION IN WESTERN EUROPE	M	NKHOZ	3
74	PRICE FOOD SOLD TO COM. CO-OPS AT NEGOT P'S, 1970M	1970=100	UN	3
75	WORLD IMPORT PRICES WEIGHTED BY SOVIET EXPORTS	1963=10	NKHOZ	3
76	UNIT VALUE PRICE OF TRMCM	1970=1	HEWETT	3
77	CONSUMPTION PRICE, FOOD (FROM PIRF70 & PAF70)	1970=1	TRAN	3
78	GNP DEFLATOR, CURRENT RUHLE INCOME MEASURE/REAL GNP	MSUS/10	ESTIMAT	3
79	PRICE OF GOLD	1963=10	UN	3
80	PRICE INDEX OF WORLD MARKET GRAIN PRICES	1972=1	NKHOZ	3
81	INVESTMENT DEFLATOR, AGRICULTURE	1972=1	NKHOZ	3
82	INVESTMENT DEFLATOR, CONSTRUCTION SECTOR	1972=1	NKHOZ	3
83	INVESTMENT DEFLATOR, HOUSING	1972=1	NKHOZ	3
84	INVESTMENT DEFLATOR, INDUSTRY	1972=1	NKHOZ	3
85	INDEX OF STATE RETAIL PRICES FOR FOOD GOODS (DEFLATED)	1970=1	TRAN	3
86	INVESTMENT DEFLATOR, SERVICES	1972=1	NKHOZ	3
87	INVESTMENT DEFLATOR, TRANSPORT AND COMMUNICATIONS	1972=1	NKHOZ	3
88	INDEX OF WHOLESALE INDUSTRIAL PRICES, HEAVY INDUSTRY (DEFLATED)	1970=1	TRAN	3
89	INDEX OF WHOLESALE INDUSTRIAL PRICES LIGHT AND FOOD INDUSTRY (DEFLATED)	1970=1	TRAN	3
90	WORLD MARKET PRICES OF MANUFACTURED GOODS	1963=10	UN	3
91	UNIT VALUE PRICE OF TRMCM	1963=10	HEWETT	3
92	CONSUMPTION PRICE, TOTAL (FROM PIRF70)	1970=1	TRAN	3
93	CONSUMPTION PRICE, TOTAL (FROM PIRF70)	1970=1	TRAN	3
94	OFFICIAL EXCHANGE RATE OF THE RUHLE IN DOLLARS	NONE	NKHOZ	3
95	WORLD MARKET PRICES OF PRIMARY PRODUCTS	1963=10	UN	3
96	UNIT VALUE PRICES OF SUGAR IMPORTS FROM CUBA	1963=10	UN	3
97	WORLD SUGAR PRICES	1970	0.V, TORG	3
98	SOVIET TRADE WITH WORLD, IMPORTS, OFFICIAL PRICE INDEX	1970	0.V, TORG	3
99	PRICES OF TOTAL WORLD IMPORTS	1970	0.V, TORG	3
100	SOVIET TRADE WITH WORLD, EXPORTS, OFFICIAL PRICE INDEX	1970	0.V, TORG	3

DOCUMENTATION

SERIES LABEL	VAR#	DESCRIPTION	UNITS	SOURCE	PRECISION
PUBF	443	MATERIAL INPUTS DEFLATOR: AGRICULTURE	1970=1.0	GUILL76	4
PUCG	442	MATERIAL INPUTS DEFLATOR: CONSTRUCTION	1970=1.0	GUILL76	4
PUCB	435	MATERIAL INPUTS DEFLATOR: CHEMICALS & PETROCHEMS.	1970=1.0	GUILL76	4
PUCM	438	MATERIAL INPUTS DEFLATOR: CONSTRUCTION MATERIALS	1970=1.0	GUILL76	4
PUCP	431	MATERIAL INPUTS DEFLATOR: COAL PRODUCTS	1970=1.0	GUILL76	4
PUEP	433	MATERIAL INPUTS DEFLATOR: ELECTROENERGY	1970=1.0	GUILL76	4
PUEP	436	MATERIAL INPUTS DEFLATOR: FOREST PRODUCTS	1970=1.0	GUILL76	4
PUMH	434	MATERIAL INPUTS DEFLATOR: MACHINE BUILDING	1970=1.0	GUILL76	4
PUNE	430	MATERIAL INPUTS DEFLATOR: METALLURGY	1970=1.0	GUILL76	4
PUNC	441	MATERIAL INPUTS DEFLATOR: IND. NEC	1970=1.0	GUILL76	4
PUCB	446	MATERIAL INPUTS DEFLATOR: OTHER BRANCHES	1970=1.0	GUILL76	4
PUPA	437	MATERIAL INPUTS DEFLATOR: PAPER	1970=1.0	GUILL76	4
PUPF	440	MATERIAL INPUTS DEFLATOR: PROCESSED FOODS	1970=1.0	GUILL76	4
PUPG	432	MATERIAL INPUTS DEFLATOR: PETROLEUM PRODUCTS	1970=1.0	GUILL76	4
PUSG	439	MATERIAL INPUTS DEFLATOR: SOFT GOODS	1970=1.0	GUILL76	4
PUTC	444	MATERIAL INPUTS DEFLATOR: TRANSPORT & COMMUNICATION	1970=1.0	GUILL76	4
PUD	445	MATERIAL INPUTS DEFLATOR: TRADE & DISTRIBUTION	1970=1.0	GUILL76	4
PXC09	127	PRICE DEFLATOR, CONSTRUCTION ACTIVITY	1972=	1. NARKHU	3
P599	213	IMPORTS, PRICE DEFLATOR, MANUFACTURED GOODS	195	00 MEFA	3
PTICE9	422	EXPORT PRICE INDEX, GERMANY, SITC 7.1, NONELEC MACHINERY	1970=1	NBER	3
GFIN	396	DUMMY, =1 IN 1969 AND 1973	NONE	NONE	3
DEVP	23	FIVE-YEAR-PLAN CYCLE (1954=57, 62-64, 69-71, 74-76, ETC.)	NONE	DG	3
GLIM	292	DUMMY TIME TREND FOR TECHNOLOGY CHANGE, 1975=1	NONE	DAG	3
GLT28	161	LOG TIME TREND 1928=0	NONE	TRAN	3
QPL5	203	FIVE YEAR PLAN DUMMY (54-57, 63-66, 69-71, 74-76)	NONE	D-G	3
QPM67	253	PRICE REFORM DUMMY FOR 1967=68	NONE	D-G	3
QSM65	201	DUMMY VARIABLE FOR 1954=1968 (PRIVATE AGRICULTURAL EMPLOYMENT)	NONE	C-H	3
QSM67	252	PRICE REFORM DUMMY BEFORE 1967=1, 1967=5, AFTER 1967=0	NONE	NONE	3
QSM68	222	SHIFT VARIABLE FOR 1968 ON =1	NONE	D-G	3
QSM71	421	DUMMY, =1 THRU 1970 =0 AFTER 1970	NONE	NONE	3
QSM72	397	DUMMY, =1 THRU 1971 =0 AFTER 1971	NONE	NONE	3
Q150	160	TIME VARIABLE WITH 1950=1 AND 1973=24	NONE	NONE	3
QMEF	226	DUMMY VARIABLE FOR 1967-1969 (WAGE REFORM)	NONE	C-H	3
Q4590	195	DUMMY, SCALED BY VOLUME OF EMACH, 64-65=1, 69-70=1.0, 0 OTHERWISE	NONE	NONE	3
Q5659	249	DUMMY VARIABLE FOR 1958-59	NONE	NONE	3
Q5860	247	DUMMY VARIABLE FOR 1958-60	NONE	NONE	3
Q5861	242	DUMMY VARIABLE FOR 1958-61	NONE	NONE	3
Q59	248	DUMMY VARIABLE FOR 1959	NONE	NONE	3
Q5963	464	DUMMY VARIABLE FOR 1959-1963	NONE	NONE	3
Q6061	465	DUMMY VARIABLE FOR 1960-1961	NONE	NONE	3
Q6064	229	DUMMY VARIABLE FOR 1960-1964	NONE	ONE	1
Q61	216	DUMMY VARIABLE FOR 1961	NONE	NONE	3
Q6162	217	DUMMY VARIABLE FOR 1961-62	NONE	NONE	3
Q6164	199	DUMMY VARIABLE FOR 1961-64	NONE	NONE	3
Q6165	246	DUMMY VARIABLE FOR 1961-65	NONE	NONE	3
Q62	207	DUMMY VARIABLE FOR 1962	NONE	NONE	3
Q6263	200	DUMMY VARIABLE FOR 1962-62	NONE	NONE	3
Q6264	335	DUMMY VARIABLE FOR 1962-64	NONE	NONE	3
Q63	208	DUMMY VARIABLE FOR 1963	NONE	NONE	3
Q6364	196	DUMMY VARIABLE FOR 1963-64	NONE	NONE	3

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SERIES LABEL	VAR#	DESCRIPTION	UNITS	SOURCE	PRECISION
Q636R	243	DUMMY VARIABLE FOR 1963-68	NONE	NONE	3
Q646S	336	DUMMY VARIABLE FOR 1964-65	NONE	NONE	3
Q646S	332	DUMMY VARIABLE FOR 1964-65	NONE	NONE	3
Q646S	250	DUMMY VARIABLE FOR 1964-66	NONE	NONE	3
Q646S	204	DUMMY VARIABLE FOR 1965	NONE	NONE	3
Q656B	339	DUMMY VARIABLE FOR 1965-66	NONE	NONE	3
Q656B	214	DUMMY VARIABLE FOR 1965-66	NONE	NONE	3
Q656B	215	DUMMY VARIABLE FOR 1966	NONE	NONE	3
Q666R	219	DUMMY VARIABLE FOR 1966-1968	NONE	NONE	3
Q666R	400	DUMMY VARIABLE FOR 1966-1969	NONE	NONE	3
Q6672	398	DUMMY VARIABLE FOR 1966-1972	NONE	NONE	3
Q67	225	DUMMY VARIABLE FOR 1967	NONE	NONE	3
Q676R	221	DUMMY VARIABLE FOR 1967-68	NONE	NONE	3
Q68	205	DUMMY VARIABLE FOR 1968, INDUSTRY WAGE	NONE	TRAN	3
Q686R	223	DUMMY VARIABLE FOR 1968-69	NONE	NONE	3
Q6870	197	DUMMY VARIABLE FOR 1968-70	NONE	NONE	3
Q69	206	DUMMY VARIABLE FOR 1969	NONE	NONE	3
Q690N	202	DUMMY VARIABLE FOR 1969 ON	NONE	NONE	3
Q70	209	DUMMY VARIABLE FOR 1970	NONE	NONE	3
Q717S	399	DUMMY VARIABLE FOR 1971-1975	NONE	NONE	3
Q73	409	DUMMY FOR 1973	NONE	NONE	3
Q74	395	DUMMY VARIABLE FOR 1974	NONE	NONE	3
RGX6F9	374	RATIO GVO/X 1 AGRICULTURE/FORESTRY	GDG	GDG	3
RGX6G9	373	RATIO GVO/X 1 CONSTRUCTION	GDG	GDG	3
RGX6H9	366	RATIO GVO/X 1 CHEMICALS & PETROCHEMICALS	GDG	GDG	3
RGX6I9	369	RATIO GVO/X 1 CONSTRUCTION MATERIALS	GDG	GDG	3
RGX6J9	362	RATIO GVO/X 1 COAL PRODUCTS	GDG	GDG	3
RGX6K9	364	RATIO GVO/X 1 ELECTROENERGY	GDG	GDG	3
RGX6L9	367	RATIO GVO/X 1 FOREST PRODUCTS (INCL. PAPER)	GDG	GDG	3
RGX6M9	365	RATIO GVO/X 1 MACHINE BUILDING	GDG	GDG	3
RGX6N9	361	RATIO GVO/X 1 METALLURGY	GDG	GDG	3
RGX6O9	372	RATIO GVO/X 1 IND. NEC	GDG	GDG	3
RGX6P9	377	RATIO GVO/X 1 OTHER BRANCHES	GDG	GDG	3
RGX6Q9	368	RATIO GVO/X 1 PAPER AND PAPERBOARD	GDG	GDG	3
RGX6R9	371	RATIO GVO/X 1 PROCESSED FOODS	GDG	GDG	3
RGX6S9	363	RATIO GVO/X 1 PETROLEUM PRODUCTS	GDG	GDG	3
RGX6T9	370	RATIO GVO/X 1 SOFT GOODS	GDG	GDG	3
RGX6U9	375	RATIO GVO/X 1 TRANSPORT/COMMUNICATIONS	GDG	GDG	3
RGX6V9	376	RATIO GVO/X 1 DOMESTIC TRADE	GDG	GDG	3
RTOP9	245	TAX RATE PROFITS	NONE	NONE	3
RTIO9	218	DEVIATIONS FROM MEAN OF TURNOVER TAX RATE (SMOOTHED)	NONE	NONE	3
RTIO9	220	TAX RATE, ADJUSTMENT, OTHER SOCIAL SECTOR	TRAN	TRAN	3
RXGV49	228	RATIO VALUE ADDED(CUR. PRICES) /GNP	NONE	NONE	3
SA19	100	INDEX OF AGRICULTURAL INPUTS, SOVN AREA	1965R	GDG	3
TDOUS*9	139	REVENUES, DEDUCTIONS FROM PROFIT, STATE ENTERPRISES	B. RUBL	GDG	3
TINS*9	406	TRADE UNION AND PARTY DUES	B. CUR. RUBLES	JEC76	3
TINS*9	407	INSURANCE PREMIUMS	B. CUR. RUBLES	JEC76	3
TUSS*	141	REVENUES, OTHER SOCIAL SECTORS	B. RUBL	PRAVDA	3
TP*	144	TOTAL STATE DEDUCTIONS (1973 FIGURES)	B. RUBL	73JEC34	3
TPA*9	251	ADJUSTMENT FOR LOCAL TAXES, ADMISSION FEES, AND LOTTERIES	B. RUBL	73JEC	3

SOVIET MODEL DATABASE

DOCUMENTATION

SERIES LABEL	NAME DESCRIPTION	UNITS	SOURCE	PRECISION
TRDP*	193 REVENUES, POPULATION (INCOME TAXES, STATE BONDS, LOTTERIES ETC)	R RUBL	NKMOZ	3
TR*	195 STATE BUDGET, TOTAL REVENUES (CURRENT RUBLES)	R RUBL	NKMOZ	3
TRD*	197 REVENUES, SOCIAL INSURANCE DEDUCTIONS	R RUBL	NKMOZ	3
TT*	199 REVENUES, TURNOVER TAX	R RUBL	GUILL76	3
UAF	191 MATERIAL INPUTS: AGRICULTURE	R, 1973 RUBLES	GUILL76	3
UCG	190 MATERIAL INPUTS: CONSTRUCTION	R, 1970 RUBLES	GUILL76	3
UCH	193 MATERIAL INPUTS: CHEMICALS & PETROCHEMICALS	R, 1970 RUBLES	GUILL76	3
UCM	196 MATERIAL INPUTS: CONSTRUCTION MATERIALS	R, 1970 RUBLES	GUILL76	3
UCP	198 MATERIAL INPUTS: COAL PRODUCTS	R, 1970 RUBLES	GUILL76	3
UEP	191 MATERIAL INPUTS: ELECTROENERGY	R, 1970 RUBLES	GUILL76	3
UEP	191 MATERIAL INPUTS: FOREST PRODUCTS	R, 1970 RUBLES	GUILL76	3
UHP	192 MATERIAL INPUTS: MACHINE-BLDG, & METAL-WKRG,	R, 1970 RUBLES	GUILL76	3
UNE	197 MATERIAL INPUTS: METALLURGY	R, 1970 RUBLES	GUILL76	3
UNC	199 MATERIAL INPUTS: IND, NEC	R, 1970 RUBLES	GUILL76	3
UOR	194 MATERIAL INPUTS: OTHER BRANCHES	R, 1970 RUBLES	GUILL76	3
UPA	195 MATERIAL INPUTS: PAPER	R, 1970 RUBLES	GUILL76	3
UPF	196 MATERIAL INPUTS: PROCESSED FOODS	R, 1970 RUBLES	GUILL76	3
UPF	198 MATERIAL INPUTS: PETROLEUM PRODUCTS	R, 1970 RUBLES	GUILL76	3
USG	197 MATERIAL INPUTS: SOFT GOODS	R, 1970 RUBLES	GUILL76	3
UTC	192 MATERIAL INPUTS: TRANSPORT & COMMUNICATION	R, 1970 RUBLES	GUILL76	3
UTD	193 MATERIAL INPUTS: TRADE & DISTRIBUTION	R, 1970 RUBLES	GUILL76	3
MAGA	460 AVERAGE WAGE-STATE AGRICULTURE	RUBLES	NARKHOZ	3
MAGCH	452 AVERAGE WAGE-CHEMICALS	RUBLES	VSIEMP, WAGE FUND 3	3
MAGCM	455 AVERAGE WAGE-CONSTR MATERIALS	RUBLES	VSIEMP, WAGE FUND 3	3
MAGCON	459 AVERAGE WAGE-CONSTRUCTION	RUBLES	NARKHOZ	3
MAGCP	448 AVERAGE WAGE-COAL PRODUCTS	RUBLES	VSIEMP, WAGE FUND 3	3
MAGEP	450 AVERAGE WAGE-ELECTRIC POWER	RUBLES	VSIEMP, WAGE FUND 3	3
MAGE	443 AVERAGE WAGE-ECONOMY	RUBLES	NARKHOZ	3
MAGE*	447 AVERAGE WAGE-FERROUS METALLURGY	RUBLES	VSIEMP, WAGE FUND 3	3
MAGFP	453 AVERAGE WAGE-FOREST PRODUCTS	RUBLES	VSIEMP, WAGE FUND 3	3
MAGI	458 AVERAGE WAGE-INDUSTRY	RUBLES	NARKHOZ	3
MAGR	451 AVERAGE WAGE-MBHW	RUBLES	VSIEMP, WAGE FUND 3	3
MAGPF	457 AVERAGE WAGE-PROCESSED FOOD	RUBLES	VSIEMP, WAGE FUND 3	3
MAGPG	449 AVERAGE WAGE-PETROLEUM & GAS	RUBLES	VSIEMP, WAGE FUND 3	3
MAGP	454 AVERAGE WAGE-PAPER	RUBLES	NARKHOZ	3
MAGSG	456 AVERAGE WAGE-SOFT GOODS	RUBLES	VSIEMP, WAGE FUND 3	3
MAGTC	451 AVERAGE WAGE-TRANS & COMM	RUBLES	VSIEMP, WAGE FUND 3	3
MAGTD	462 AVERAGE WAGE-TRADE & DIST	RUBLES	I-O DATA INT 3	3
WAK*	403 AVERAGE WAGE, COLLECTIVE FARMS	RUBLES	VSIEMP, WAGE FUND 3	3
WAS*	106 AVERAGE WAGE, STATE FARMS	RUBLES	VSIEMP, WAGE FUND 3	3
WCF*	107 WAGES, CONSTRUCTION	RUBLES	NARKHOZ	3
WDF*	405 AVERAGE WAGE, MILITARY MANPOWER	RUBLES/YR,	JEC76-TRAN	3
WGS*	110 ANNUAL WAGE RATE, GOVERNMENT & SERVICES	CUR, R,	NKH	3
WI*	105 WAGES, INDUSTRY	RUBL	TOJECR2	3
WJ*	109 WAGES, DOMESTIC TRADE AND DISTRIBUTION	RUBLS	TOJECR2	3
WTC*	108 ANNUAL WAGE RATE, TRANSPORT & COMMUNICATIONS	CUR, R,	NKH	3
WTDW*	297 TOTAL IMPORTS OF THE DEV, WEST	1963=10	UN M, R	3
WTDW9	302 TOTAL IMPORTS OF THE LDC-9	1963=10	UN M, RU	3
WTDCC9	305 TOTAL IMPORTS OF THE WORLD	1963=10	UN M, RU	3
WTC9	312 NORMAL CROP OUTPUT	R, 1970 RUBLES	QERT6-INTERP	1

DOCUMENTATION

SERIES LABEL	NAME DESCRIPTION	UNITS	SOURCE	PRECISION
XACTOAL9	103 VALUE OF FEED FED TO LIVESTOCK	M 1968	SRI	3
XAGIN	89 NORMAL AGRICULTURAL OUTPUT	B, 1970 RUBLES	DER76-INTERP	3
XAG170	88 TOTAL NET FARM OUTPUT, 1970 PRICES	B, 1970 RUBLES	SAIOER 062475	3
XAM	418 NORMAL OUTPUT, MEAT PRODUCTION		DER76-TRAN	3
XAN1470	415 NORMAL OUTPUT, ANIMAL PRODUCTS TOTAL		SAIOER 062475	3
XAN1470	414 GROSS LIVESTOCK PRODUCTION, 1970 PRICES		SAIOER 062475	3
XCRUPT0	411 VALUE OF TOTAL CROPS, 1970 PRICES	B RUB	SAIOER 062475	3
XCRUPT0	90 CONSTRUCTION ACTIVITY		MARKHOZ	3
XCRUPT0	92 INDEX OF TRADE ACTIVITY	1970=100	DER75	3
XGOLD9	199 GOLD PRODUCTION	TONS	DER	3
XGR	337 GRAIN PRODUCTION	M TONS	DIAMOND	3
XGRM9	293 GRAIN PRODUCTION IN THE EUROPEAN CMEA	M TONS	FAO	3
XGRLOC9	303 GRAIN PRODUCTION IN THE LDC+S	M TONS	FAO	3
XGRPK	295 SECOND PEAK GRAIN OUTPUT	M TONS	DIAMOND	3
XGRIN	416 NORMAL GRAIN OUTPUT	M, METRIC TONS	SAIOER75	3
XGRT	413 SOVIET GRAIN PRODUCTION, GROSS GRAIN AGGREGATE	M TONS	FAO	3
XGRM9	300 GRAIN PRODUCTION IN WESTERN EUROPE	1966=100	GDC	3
XGVDAF	357 INDEX OF AGRICULTURE/FORESTRY GVO IN CURRENT PRICES	1966=100	GDC	3
XGVDCG	356 INDEX OF CONSTRUCTION GVO IN CURRENT PRICES	1966=100	GDC	3
XGVUCH	349 INDEX OF CHEMICALS AND PETROCHEMICALS GVO IN CURRENT PRICES	1966=100	GDC	3
XGVUCH	352 INDEX OF CONSTRUCTION MATERIALS GVO IN CURRENT PRICES	1966=100	GDC	3
XGVUCP	345 INDEX OF COAL PRODUCTS GVO IN CURRENT PRICES	1966=100	GDC	3
XGVUEP	347 INDEX OF ELECTROENERGY GVO IN CURRENT PRICES	1966=100	GDC	3
XGVUEP	350 INDEX OF FOREST PRODUCTS GVO IN CURRENT PRICES	1966=100	GDC	3
XGVUMH	348 INDEX OF MACHINE BUILDING GVO IN CURRENT PRICES	1966=100	GDC	3
XGVOME	344 INDEX OF METALLURGY GVO IN CURRENT PRICES	1966=100	GDC	3
XGVUNC	355 INDEX OF IND. NEC GVO IN CURRENT PRICES	1966=100	GDC	3
XGVUOB	360 INDEX OF OTHER BRANCHES GVO IN CURRENT PRICES	1966=100	GDC	3
XGVUPA	351 INDEX OF PAPER GVO IN CURRENT PRICES	1966=100	GDC	3
XGVUPE	354 INDEX OF PROCESSED FOODS GVO IN CURRENT PRICES	1966=100	GDC	3
XGVUPP	346 INDEX OF PETROLEUM PRODUCTS GVO IN CURRENT PRICES	1966=100	GDC	3
XGVUSG	353 INDEX OF SOFT GOODS GVO IN CURRENT PRICES	1966=100	GDC	3
XGVUTC	358 INDEX OF TRANSPORT/COMMUNICATIONS GVO IN CURRENT PRICES	1966=100	GDC	3
XGVUTO	359 INDEX OF DOMESTIC TRADE GVO IN CURRENT PRICES	1966=100	GDC	3
XICH	82 CHEMICALS	1970=10	DER74	3
XICM	85 CONSTRUCTION MATERIALS	1970=10	DER74	3
XICP	7A COAL PRODUCTS	1970=10	DER74	3
XIEP	77 ELECTRIC POWER	1970=10	DER74	3
XIFM	80 FERROUS METALS	1970=10	DER74	3
XIFP	84 FOREST PRODUCTS	1970=10	DER74	3
XIB	83 MACHINERY	1970=1	DER74	3
XIN	81 NONFERROUS METALS	1970=10	DER74	3
XIPA	18A PAPER AND PAPERBOARD	1970=10	DER74	3
XIPF	87 PROCESSED FOODS	1970=10	DER74	3
XIPP	79 PETROLEUM PRODUCTS & GAS	1970=10	DER74	3
XISG	86 SOFT GOODS	1970=10	DER74	3
XIT	76 TOTAL INDUSTRIAL PRODUCTION	1970=10	DER74	3
XMEAT170	417 VALUE OF MEAT PRODUCED, 1970 PRICES	B, 1970 RUBLES	SAIOER 062475	3
XSER70	93 INDEX OF SERVICES, 1970 WEIGHTS	1970=100	DER74	3
XSLG9	315 SUGAR PRODUCTION OF CUBA	100000T	FAO	3

DOCUMENTATION

SERIES LABEL	VAR# DESCRIPTION	UNITS	SOURCE	PRECISION
XT7H	91 TRANS-COMM INDEX, 1970 WEIGHTS, RUBLE SERIES FOR COMM	1970=100	D-G	3
YC4LA9	192 NET MATERIAL PRODUCT IN CONSTANT PRICES, CMEA	1963=10	UNCTAD	3
Z01*	117 TOTAL AMORTIZATION FUNDS, NATIONAL ECONOMY	B, CUR, M	NKH	0
Z070	116 REAL DISPOSABLE HOUSEHOLD INCOME	B, 1970 RUBLES	TRAN	3
ZFPG*9	119 PLANNED GROSS PROFITS, NATIONAL ECONOMY	B, RUB	RAVDA	0
ZGW*	111 GROSS EARNINGS, WAGE AND SALARY WORKERS	B, CUR, RUBLES	JEC76	3
ZIK60	115 AGRICULTURAL INCOME IN KIND	B, 1960 KURLES	TRAN	3
ZMDA*	181 MILITARY PAY AND ALLOWANCES	B, CUR, RUBLES	JEC76	3
ZPCP*9	182 PROFITS DISTRIBUTED TO COOPERATIVE MEMBERS	B, RUB	JEC76	3
ZPG*	118 ACTUAL GROSS PROFITS, NATIONAL ECONOMY	B, CUR, M	NKH02	0
ZR2*	427 RESIDUAL INCOME * SOVMOD II	B, CUR, RUBLES	TRAN	3
ZSAG*	113 NET HOUSEHOLD INCOME FROM AGRICULTURAL SALES	B, CUR, RUBLES	JEC76-TRAN	3
ZTD*	180 DISPOSABLE HOUSEHOLD MONEY INCOME	B, CUR, RUBLES	JEC76-TRAN	3
ZTG*	114 GROSS HOUSEHOLD MONEY INCOME	B, CUR, RUBLES	JEC76-TRAN	3
ZWK*	112 WAGE PAYMENTS TO COLLECTIVE FARM MEMBERS	B, CUR, RUBLES	JEC76	3